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Embodying difference : hybrid geographies of deaf people's technological experience

EMBODYING DIFFERENCE: HYBRID GEOGRAPHIES OF DEAF PEOPLE'S TECHNOLOGICAL EXPERIENCE

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Abstract

The social model of disability, which highlighted the construction of disability through barriers to participation, has been a useful tool for combating oppression. However, it has been limited by a reluctance to engage with embodied experiences, and the continuation of binaries that perpetuate the notion of abnormality. To move beyond the notion of disability as just a product of the social, the natural needs to be included. Moreover, following actor-network theory, it is clear that the technological is also implicated in the lived experiences of being considered disabled. Indeed, it is through the heterogeneous interaction of the social, the natural, and the technological, that such performances are made. To explore these relations this thesis concentrates on D/deafness, partly because I am D/deaf, but also because D/deaf people routinely interact with various technologies that can situate them. Nineteen interviews were conducted with D/deaf people, asking them about their perceptions of technology from both an individual and community perspective. A further eighteen D/deaf Internet users and website designers answered questionnaires via e-mail, which explored the construction and use of D/deaf cyberspaces. From these responses, engagements with machines were revealed as hybrid and, through their oscillating presence, they demonstrated the fluidity of corporeality and the importance of a politics of normalisation. In addition, individual and collective emotions, memories, and modes of communication, especially an acceptance of sign language, were revealed as significant. Thus, within this rhizomatic system, rather than being classified as either a normal or an abnormal body, there are instead bodies, elements, and things that are unbounded, where space can be seen as fluid, and the distinction of abnormality is broken down and exposed as temporal and contingent. Hence, corporeal and communication differences can be included and understood, and technologies, rather than perpetuating oppression can reflect the mutability of bodies.

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Author's Declaration

I declare that the work in this dissertation was carried out in accordance with the Regulations of the University of Bristol. The work is original except where indicated by special reference in the text and no part of the dissertation has been submitted for any other degree. Any views expressed in the dissertation are those of the author and in no way represent those of the University of Bristol. This dissertation has not been presented to any other University for examination either in the United Kingdom or overseas.

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Chapter One: Introduction

A standard hearing test incorporates a number of associations. There's a machine that transmits single frequency sounds, attached to a response switch and some headphones. There's a pen and a representation of a graph drawn on some paper, which contain assumptions about normality. There are two humans: the audiologist who will be able to hear, and the person being tested who may be deaf. This is a routine review. I already know that I am deaf and I have worn two hearing aids for years. To take the test I have to take out my hearing aids, which means I can't hear the audiologist but, reinforced by the dominance of aural spaces, she nevertheless continues to talk to me. She is describing what she is doing. I know the routine so I don't bother trying to lip-read. She places the headphones on my head and hands me a switch attached by a wire to the machine. I have to press the switch whenever I hear a noise. Starting with my left ear, the first noise I perceive is a loud low frequency tone, which gets increasingly quieter. I confidently press the switch about four or five times. Then the frequency gets higher and I begin to get confused. Was that a noise? Or is that my usual tinnitus, which in one of my ears mimics the beeping sounds? I don't press the switch any more. The machine swaps to my right ear, and the same process occurs. Having recorded my responses on a graph, the audiologist has produces an audiogram of my hearing and my deafness. She and the machine in comparison with an average declare that I have severe/profound - ski-slope - bilateral - high frequency loss. In other words, I am deaf in both ears. The audiologist can't understand how I have been managing with my hearing aids, as the BE54 model is not powerful enough for my profile. She recommends new ones, the BE201 model, but warns me that they are much bigger. I say that I am not really bothered by the cosmetics. This is only partly true, I *am* conscious of people looking at my hearing aids, but I feel that I should be assertive about them, because I can't hear without them. The audiologist hands me the new aids. They are twice the size of my old ones. I put them in and immediately notice that my hearing is less fuzzy. "Greater clarity?" the audiologist enquires. I agree and leave the clinic with my new hearing aids, resisting the urge to go to the bathroom and look in the mirror. I am upset. I am deafer than I thought, and I

now have bigger, more noticeable hearing aids. But as I walk home, I comfort myself with the same reasoning I have always applied to my hearing aids, which is - being on the side of my head I can't see them that well, so appearance-wise I should just ignore them. As for my deafness being worse, I realise that my deafness is exactly the same as it was before the appointment. It's the medical classification, model of my hearing aids, and possibly my ability to be a bit hearing that has changed.

Being D/deaf, I constantly engage with various devices that are placed as 'special equipment'. My D/deafness and my relationships with machines situate me. This process fascinates me. Through the shared understandings of mechanical interactions, my D/deafness also connects me to other D/deaf people. This intrigues me, and has led me towards an exploration of D/deaf people's technological experience.

Theoretical routes

This thesis incorporates a variety of theoretical pathways, which not only reflect my interests, but are also based upon my sensory experiences. One of the main directions concerns the development of a disability theory that seeks an embodied as well as a social understanding of being disabled (e.g. Patterson & Hughes, 1999). By necessity, this includes a critique of binary forms of structuring, especially the opposition between normal and abnormal bodies, and the distinction maintained between nature and culture. For, as Hall (2000) points out, disability makes explicit the intersection between the natural and the social 'body'. This rather points in another direction, namely actor-network theory, and geographical concerns with hybridity and the spaces between dualities (e.g. Whatmore, 1997, 1999). In particular, I am interested in the divides of human and machine, and the spatial implications of incorporating technologies.

Through the lens of these perspectives, I have chosen to concentrate on D/deafness for a number of reasons. Whilst statements of positionality can never entirely capture the complexity of relations within a project, they can highlight the motivations behind the research (Butler, 2001). Certainly, my own

D/deafness is a crucial inspiration for this project, and its presence has been a major factor in all aspects of the research. In addition, D/deaf people routinely engage with various assistive technologies, and responses to these devices typically range from acceptance to vitriolic rejection; mechanical connections therefore are structured around D/deaf identities. Furthermore, the process of association has been negotiated for many years and mediations have occurred both in corporeal and collective space. Therefore, D/deafness is pertinent as well as personal. Controversially, however, I am exploring D/deafness through a disability perspective, even though many Deaf people reject this classification as they see themselves as a linguistic minority. In keeping with my stance against binaries, I believe that D/deafness[1] is *both* a disability, because it is created to be one, *and* not a disability, because it can be an ordinary experience. In effect, D/deafness exposes the normal/abnormal divide contained within disability. Including D/deaf perspectives therefore, can work towards the inclusion of differences without pathologising specific bodies.

Social model of disability

Within disability theory the development of the social model (e.g. Abberley, 1987; Oliver, 1990a, 1996a), which highlighted the centrality of disabling barriers and the restriction of participation due to the social construction of disability, was an important step in disability consciousness. It provided a critique of the dominant medical model that mainly situates disability as a tragic or pathological occurrence, where people with disabled bodies are seen as abnormal and thus requiring treatment or rehabilitation towards becoming as normal as possible. This critique was significant because the social model moved away from individualism towards a collective recognition of corporeal discrimination, which was used as the basis for the development of various disability movements (see e.g. Oliver, 1990a). However, whilst this positioning was valued, there was also criticism, especially from disabled feminists, because the individual experience of having specific impairments was somewhat overlooked (e.g. Morris, 1991; French, 1993; Crow, 1996). Disability was, they

[1]The slash between the big D and the little d in D/deafness is not denoting a dualism it signifies the presence of deafness as a medical category and Deafness as a cultural group (see chapter three for more detail).

agreed, something imposed by societal barriers, but the subjectivity of having particular impairments was also an important aspect of being disabled (Crow, 1996). Resistance to the incorporation of embodied experience would, they believe, limit both theoretical and practical possibilities of the social model in the long-term. This debate has not been resolved, but there have been a number of proposals that integrate embodied and cultural aspects of disability (e.g. Thomas, 1999). The difficulty lies in the continuation of binary dominance, where a distinction is maintained between impairment (the physical fact) and disability (the restrictions experienced), which as Corker (Corker in Thomas & Corker, 2002) argues, does not examine the myriad of interactions that these two terms conceal. Whilst disability is a social construction, the natural aspects of impairment are inescapably present. At the same time, the opposition between normal and abnormal bodies also needs to be broken down, because corporeal differences cannot be integrated whilst this conflict remains. Thus, instead of perpetuating binary thinking, we need to move towards a reconfiguration that recognises connections, such as the notion of associative networks.

Technological associations

This leads us to actor-network theory, or ANT (e.g. Callon, 1986; Latour, 1987; Law, 1991; Law & Hassard, 1999). Rather than prioritising human aspects, ANT highlights the involvement and incorporation of other things (see e.g. Murdoch, 1997). Agency is hybridised, and thus becomes collective, which in turn makes the individual subject multiple (Whatmore, 1999).

> '...humans are fabricated - in language, through discursive formations, in their various liaisons with technological and natural actors, across networks that are heterogeneously comprised of humans and non-humans who are themselves so comprised. Instead of humans and non-humans we are beginning to think about flows, movements, arrangements, relations. It is through such dynamics that the human (and the non-human) emerges' (Michael, 2000 p. 1).

This provides an understanding of how 'the social' is created and maintained through associations that are translated in everyday practices (see Thrift, 1996a), as they become stabilised as norms through reiteration (Murdoch, 1995).

Likewise, nature also comes about through the relationships between things; there is a network of associations. Indeed, ' ...a technology only 'works' because certain configurations of the social, the technological and the natural are in place' (Michael, 2000 p.1). Linked to these notions can be found Deleuze and Guattari's (1988) rhizome system, which emphases a more flexible understanding of these relations (Latour, 1999a; Law & Mol, 2001). A rhizome metaphor can be more useful than the idea of a network because it does not contain echoes of linear routes and has no set point of origin. As far as corporeality is concerned, therefore, the fallacy of an essential and bounded body is highlighted, and an aggregation of effects is pointed to instead (Doel, 1996). Within this system, bodies can be seen as fluid, because through connections they do not have borders, indeed they can go beyond the skin and incorporate external objects (Grosz, 1994). For disabled people these objects can include tools used in diagnostics and hence classifications, as well as a host of assistive devices, all of which are situated in rhizomatic associations. The social, natural, and technological are brought together. This diversity of elements reveals the multiple topographies of social space, and at the same time, highlights the co-existence of both normal and abnormal identities (Mol & Law, 1994). Thus, being disabled can feel natural whilst it is also perceived to be unnatural. Within ANT, especially if translated as rhizomatic, the dualism between disability and ability is reconfigured towards a continuum of body capacities. However, to a certain extent, each actant is seen as an equal element in the associations, and this overlooks certain key aspects of being human, namely competences of memory, language and emotions (Thrift, 1999a). In addition, interactions can be driven by overarching political structures used to classify and order the separation of relations (Haraway, 1997). Thus, the effects of networks contain elements of bio-power and prior assumptions about the constitution of reality. Bodies, even when difference is recognised, are in general still expected to be 'normal', especially in relation to being 'natural', technologies are therefore typically premised upon specific ideas about what a body should be, and how a machine should be employed. Even so, as Turkle (1997) suggests, a commitment to the notions of fluidity or partiality can work towards the inclusion of diversity.

> 'When identity was defined as unitary and solid it was relatively easy to recognize and censure deviation from a norm. A more fluid sense of self allows a greater capacity for acknowledging diversity. It makes it easier to accept the array of our (and others') inconsistent personae - perhaps with humour, perhaps with irony. We do not feel compelled to rank or judge the elements of our multiplicity. We do not feel compelled to exclude what does not fit' (pp. 261-262).

However, it is important to remember that despite being fluid, bodies also have substance, and geographers therefore need to flesh out the materiality of bodies (Longhurst, 2001). In other words, we need to consider what bodies are in association with machines, and in what ways they are connected (e.g. Bingham, Valentine & Holloway, 1999). In this thesis therefore, the range of practices of D/deaf people's interactions with technologies are explored. Broadly, although this can be disputed[2], this work is situated within geographies of disability.

Geography's inclusion of disability

Largely unconsidered in the past, disability issues finally began to take off in the geography literature in the 1990s[3] (e.g. Butler 1994; Butler & Bowlby, 1997). Overall, this research, influenced by the social model of disability, highlighted spatial exclusion through the disabling organisation of society based upon the notion of a normal body. Taking account of disabled feminists concerns has also lead to the inclusion of individual experiences of having a specific impairment. Gleeson (1999a) for example, in developing a materialist account, has explored the ways in which people with impairments are disabled through spatial processes, which also incorporates social embodiment, although primarily in relation to labouring bodies. Butler & Parr's (1999) excellent collection took this further, as the various chapters explicitly combined lived experiences with social constructions, and opened up the borders of corporeality to include minds as well as bodies. Thus highlighting time-space specificities of normality, which revealed the multiplicity of disability and placed 'impairments, illnesses, and mental differences' in a continuum with classifications viewed as able-bodied.

[2]Equating Deafness with disability can be problematic; this view is explained in more detail in chapter three.
[3]With the exception of e.g. Mayer (1981) and Hahn (1986).

Geographers therefore have responded well to debates from disability studies. However, as the castigation by Chouinard (1997) reminds us, ableism may still be prevalent in Geography Departments.

> 'Ableism refers to ideas, practices, institutions, and social relations that presume able-bodiedness, and by so doing, construct persons with disabilities as marginalized, oppressed, and largely invisible 'others'' (p. 380).

Whilst these concerns are being addressed in some areas (e.g. Hall, Healey & Harrison, 2002; Geography Discipline Network, 2002), nevertheless human geography needs to further the inclusion of disability. This inclusion operates on a number of levels: Geographical research should continue to seek practical solutions to issues of social exclusion and limits to participation (e.g. Valentine & Skelton, 2003). At the same time, it should be recognised that disability perspectives can extend theoretical understanding per se. Spatial knowledge is based on a dominant model that assumes a 'normal' body, which in turn is considered the 'natural' human body. As Pocock (1993) suggests, geographers should pay attention to the writings of people who are deaf or blind as 'such authors have much to teach us, not only of their worlds, but also of ours' (p. 12). Although I am uneasy about the use of 'ours', as this can be read as if deaf or blind people can't be geographers, I am in agreement with the principle of this notion - including experiences that are situated 'outside', such as having bodies (and this includes minds) with so-called impairments, *can* deepen our comprehension of the world. This thesis is therefore informed by my desire to understand some of the constructions and practices of 'disability', namely D/deafness, and through the application of this perspective seeks to further geographical knowledge of non-binary spaces.

Focusing on D/deafness

Whilst human geographers have considered various disabilities, including blindness (e.g. Golledge, 1993; Butler & Bowlby, 1997), multiple sclerosis (Mayer, 1981), and intellectual disabilities (Hall & Kearns, 2001), there has been very little written about D/deafness. Indeed, the only work that I am aware of has come out of the recent study, *Living on the Edge*, by Valentine & Skelton

(2003)[4]. This study, through in-depth interviews, explored the marginalisation of young D/deaf people in the home, workplace, and educational institutions, and highlighted communication challenges as a major factor in this process. Consequently, they stressed the importance of British Sign Language (BSL) recognition (see also Butler, McNamee, Skelton & Valentine, 2001).

> '...if BSL were to be recognised as an official language and all hearing people were introduced to it at school, all D/deaf people would have a more equal opportunity to participate in everyday life and therefore to construct the biographies of their choice' (p. 317).

They also emphasised that young D/deaf people, especially if they are gay, lesbian, Asian, or oral communicators, can suffer marginalisation *within* Deaf Communities.

> '...it is important not to lose sight of differences within the D/deaf community and not to place too much emphasis on normative models' (p. 319).

This study is important for a number of reasons: First, it revealed the significance of BSL and the shameful lack of adequate provision; second, it showed the heterogeneity of Deaf Community; and third, it described individual negotiation strategies used by D/deaf people. All of these aspects should always be remembered when considering D/deafness. It is a biological fact, but also an active experience that can incorporate a wide variety of identities, and sign language whether used or not will be influential. Valentine & Skelton's (2003) work is also important because it introduced geographers to D/deafness, which is a particularly pertinent topic for geographical consideration, especially when D/deafness is cultural.

Deafness, distinguished by a capital 'D', is a term of pride and cultural identification signifying that some deaf people, especially sign language users, consider themselves to be a linguistic minority and specific community (see e.g. Dant & Gregory, 1991). However, Deafness as a cultural identity is unusual as it lacks, or has a limited form, of genealogical lineage. Whilst some D/deaf children have Deaf parents and so are born into Deaf Community, genetic

[4]See also an earlier unpublished report by Skelton & Valentine (2002).

deafness is a recessive condition, therefore the majority of D/deaf children are born to hearing parents, although all D/deaf children are considered potential future members (Gregory, Silo & Callow, 1991; Lane, Hoffmeister, & Bahan, 1996). At the same time, D/deaf parents are most likely to have hearing children so genealogical transmission of cultural Deafness is small. Deaf Culture therefore has to be continually socially constructed. As Sacks (1991) pointed out

> 'The study of the deaf shows us that much of what is distinctively human in us - our capacities for language, for thought, for communication, and for culture - do not develop automatically in us, are not just biological functions, but are, equally, social and historical in origin...' (p. xiii).

Nevertheless, 'natural' attributes of Deafness, particularly the capacity for sign language, are drawn upon to justify the claims of being a distinct cultural group (see e.g. Higgins, 1980). Thus, the relationships between nature and culture can be exposed by a consideration of D/deafness. Furthermore, there is no Deaf homeland where D/deaf people have originated from, so geographical lineage in the traditional sense is non-existent. Deaf space however is an important component in the maintenance and expression of Deaf Culture. For example, residential schools for D/deaf children are seen as particularly significant for cultural transmission (Lane, 1992). Likewise, Deaf Clubs are viewed as vital for the expression and maintenance of Deaf Community life (Kyle & Allsop, 1982). The spatiality of D/deafness is therefore acute. Moreover, D/deaf people engage with a vast array of adaptive equipment, such as flashing alarms, minicoms, hearing aids etc. on an everyday basis. These technological connections are politically scrutinised in terms of whether they stem from a Deaf or hearing perspective. Often what matters is whether particular technologies 'feel' right, in terms of personal space, but also collectively via the cultural 'memory' of past oppressions, and in relation to sign language use. Thus, the application of ANT together with a consideration of politics and human competences of emotions, memory and language are particularly salient when exploring aspects of being D/deaf.

Research aims and spatial focus

With these issues in mind, this thesis concentrates on both the lived experience and theoretical implications of D/deafness in connection with technology. The aims of the study are: one, continue the incorporation of D/deafness within geography by exploring further aspects of being D/deaf. Two, highlight the lived experiences of being D/deaf and the practices of negotiating various technologies. Three, through the inclusion of spatial knowledge extend the understanding of disability. Four, further the theorisation of hybridity and critique binary constructions that seek to normalise people with corporeal differences.

The study focuses on three D/deaf spaces: First, embodied space - as assistive devices for D/deaf people are often intimately connected they are therefore incorporated within and mediated through embodied space. An exploration of how people feel and perceive these associations in relation to their own bodies will reveal the corporeal interactions of technology. Second, community space - as D/deafness is an individual *and* a community experience, including community space is an important component of D/deafness, especially as connections with technologies are experienced through collective meanings, which are socially and politically mediated. Third, cyberspace – as D/deaf people are increasingly creating D/deaf Internet spaces, and these websites are beginning to play a part in both self-identity and the building and maintenance of Deaf Community, looking at what makes them D/deaf and how they contribute to Deaf Culture will further an understanding of D/deaf people's interactions with technology. At the same time, as cyberspace is a multiple configuration where the virtual body can be seen as detached from the material body (e.g. Featherstone & Burrows, 1995), this has implications for the notion of corporeal boundaries.

Thesis structure

Chapter two outlines in more depth the theoretical background influencing this thesis. Beginning with the development of the social model and subsequent attempts to integrate embodied experiences of impairment, the nature/culture

debate is considered through a disability perspective. The subsequent application of this debate in geographical studies is highlighted. The chapter then discusses the notions of actor-network theory and rhizomatic associations, which are considered in relation to the technological connections encountered by disabled people. Chapter three focuses specifically on D/deafness and illustrates the medical construction of its disabled classification, and the rejection of this pathology in favour of cultural Deafness. The chapter then presents an introduction to the practices of Deaf Culture, emphasising in particular the importance of British Sign Language (BSL). The spatialisation of Deaf Community is then explored through an historical overview of the creation of Deaf education and residential schools; the idealised notion of a Deaf State; and the founding and continuation of Deaf organisations and publications. Finally, in this chapter, the progression of various technologies associated with D/deafness, flashing or vibrating alerts, textphones, hearing aids, and cochlear implants are described. Chapter four details the research methodologies employed, and includes a consideration of Deaf Cultural practices, and the implications of the hearing basis of qualitative interviewing when both the interviewer and interviewee are D/deaf. Chapters five, six and seven present the empirical findings. Chapter five looks at the perceptions and feelings of D/deaf people's interactions with technology in relation to embodied space. Chapter six extends this analysis to community space and explores mechanical engagements from a collective perspective. Chapter seven provides an overview of D/deaf Internet sites and examines the ways in which both users and designers of these spaces experience them as D/deaf. Finally chapter eight draws the findings together, and reflects on the knowledge gained in relation to the development of fluid space and the configuration of corporeal differences that exclude the notion of abnormality.

Chapter Two: Disability And Technology

In the 1970s, the medical model of disability based on cure and rehabilitation was replaced by the social model of disability, which emphasised ableist assumptions inherent in social organisation. This chapter provides a brief summary of this debate, in particular concentrating on subsequent criticism in the 1990s from disabled feminists over the exclusion of embodied experiences. The chapter then moves on to examine recent literature in disability studies that recognises the need for an and/both configuration of both social and personal aspects of being disabled. This review is then applied to geography and the inclusion of disability within the discipline, highlighting that as well as being a natural and social experience disability is also deeply spatial. Noting that disabled people can have intimate interactions with technology, this chapter then explores actor-network theory and the implications that the inclusion of machines may have for the theorisation of disability; in particular, for the 'disability' of D/deafness.

Theorising disability

Assumptions about normality and who is and who isn't disabled are part of the medical model of disability (e.g. Zola, 1972). Medicine, through tests and diagnosis, sets a standard and measures people against it. The search is for a cure or, if no cure is available, for the disabled person to become as 'normal' as possible. Being disabled is therefore, seen as an individual problem that each of us must strive to overcome or avoid. But many disabled writers and activists have disputed this model, and argued instead that disability is a social construction (e.g. Abberley, 1987; Oliver, 1990a, 1996a). Back in 1976, the Union of the Physically Impaired Against Segregation (UPIAS), stated that

> 'In our view, it is society that disables physically impaired people. Disability is something imposed on top of our impairments, by the way we are unnecessarily isolated and excluded from full participation in society. Disabled people are therefore an oppressed group in society' (UPIAS, 1976 p. 3).

UPIAS made a distinction between impairment, the physical fact, and disability, the restrictions experienced because of the impairment. Previous explanations rooted in pathology and narrow definitions of normality were comprehensively rejected, especially the medicalisation of disability. Instead, emphasis was placed on societal restrictions that disable people who have impairments, where

> 'It is not individual limitations, of whatever kind, which are the cause of the problem but society's failure to provide appropriate services and adequately ensure the needs of disabled people are fully taken into account in its social organisation' (Oliver, 1990b p. 2)

Rationally, but also passionately, the social model no longer blamed disabled people for their own oppression. Initial theorisation[5] was strongly based on materialism, where the rise of capitalism and the need for homogenous workers was seen as a defining moment in the exclusion and oppression of disabled people (e.g. Finkelstein, 1980). Oliver (1990a) extended this analysis by focusing on the ideological construction of individualism and the notion of able-bodied, which he argued led to both the institutionalisation and medicalisation of disability. To move beyond this individualism the social model as a political strategy deliberately moved away from the body, because the body was seen as the *site* of disabled oppression (Abberley, 1987). The causal relationship between impairment and disability was broken. The social model said instead of expecting the person with impairments to change, change society, and value people with impairments. This was revolutionary. The social model directly confronted ableism and was a very important step in disability consciousness.

However, in the 1990s, disabled feminists, whilst praising the importance of the social model, also began to critique the reluctance to engage with embodied experience (Morris, 1991; French, 1993; Crow, 1996). Crow (1996) for example, highlighted the radical impact of the social model when she wrote:

> 'My life has two phases: before the social model of disability, and after it. Discovering this way of thinking about my experiences was the proverbial raft in a stormy sea. It gave me an understanding of my life,

[5] See both Tregaskis (2002) and Shakespeare & Watson (2002) for an account of the development of the social model.

> shared with thousands, even millions, of other people around the world, and I cling to it. This was the explanation I had sought for years. Suddenly what I had always known, deep down, was confirmed. It wasn't my body that was responsible for all my difficulties, it was external factors, the barriers constructed by the society in which I live' (p.56).

Nonetheless, despite her praise of the social model, in the same article she also criticised the refusal to include the body, pointing out that being impaired *can* mean having difficult and unpleasant body experiences, and not acknowledging this would in the long-term weaken the potential of the social model.

> 'Disability is still socially created, still unacceptable, and still there to be changed; but by bringing impairment into our total understanding, by fully recognising our subjective experiences, we will achieve the best route to that change, the only route to a future which includes us all' (Crow, 1996 p. 72).

So, whilst disability is a product of the social nevertheless the natural aspects of impairment should also be incorporated. Such as both the body of the disabled person and the emotional experience of being both disabled and having a particular impairment. Unfortunately, inclusion of the body and emotional experiences can be seen as a negative step backwards towards individual blaming, and putting too much focus on individuals and not enough on society (Oliver, 1996a). The denial of impairment was both a deliberate and pragmatic response to past corporeal oppression (Oliver, 1996b). Therefore, some disabled theorists, not wishing to weaken the potential impact of the social model, have been reluctant to accept the validity of feminist criticism (e.g. Finkelstein, 1996). Nevertheless, the issue has continued to be debated. For example, Williams (1996) proposed a phenomenological analysis within a collectivist framework that blended the personal and political. Pinder (1997) called for a 'holistic version of the social model', which recognised both agency and structure. Shakespeare (1996a, 1997a) argued for an expanded version of the social model, which along with unequal social structures also included the cultural representation of disability as a negative 'other' that is relegated to the zone of nature. Hughes & Patterson (1997) highlighted that the binary the social model created between disability and impairment, far from being radical, reproduced

the separation of body from culture and thus mirrored the medical model it repudiated. They suggested instead a nature/culture interaction where

> 'To recapture this lost corporeal space without returning to the reactionary view that physicality determines social status, the social model requires to mount a critique of its own dualistic heritage and establish, as an epistemological necessity, that the impaired body is part of the domain of history, culture and meaning, and not - as medicine would have it - an historical, pre-social, purely natural object' (p. 326).

They were arguing for an embodied social model of disability, that is '...lived through the mutually incorporated experiences of impairment and disability (Patterson & Hughes, 1999 p. 598). Similarly, Corker & French (1999) attended to the role of discourse in the production of both disability and impairment, highlighting the importance of personal narratives and a reflexive use of the social model that worked both individually and collectively (Corker, 1999a; Snyder & Mitchell, 2001). All of these proposals moved away from materialism towards post-modern analysis that critiqued a Western preoccupation with binaries and essential accounts of root causes. Nevertheless, many disabled theorists continued to maintain a materialist focus. Thomas (1999) for example, developed a model of disability that included both disablist practises based on a capitalist mode of production and psycho-emotional dimensions of disability. She combined social aspects of disablement with subjective experiences of impairment, thus defining disability as

> '...a form of social oppression involving the social imposition of restriction of activity on people with impairments and the socially engendered undermining of their psycho-emotional well-being' (p. 60).

Whilst this solution addressed many of the concerns raised by disabled feminist, it did not disrupt the boundaries between the spheres of disability and impairment and so a nature/culture dualism remained (Corker, 1999b). This limits any individual understanding of being both impaired and disabled, and does not allow for the complexity and heterogeneity of disabled people's experiences.

Even so, Thomas's (1999) work did engage with the inclusion of embodied experiences. But despite the importance of such work, other disability theorists

have been less committed. For example, Barnes (2000) dismissed criticism of the social model as misinterpretation that 'clouds' the meaning of disability for disabled people. And Finkelstein (2001) has asserted that the debate is weakening the social model and that the arguments boil down to the recognition of personal experiences. Clearly, however disability theorists who insist on including impairment are not obfuscating nor trifling. As Morris (2001) has pointed out, if disabled people do not articulate their own perspective of difference then others will do it for them. Influenced by these debates, recent work within disability theory has continued to include analysis of structural inequalities alongside personal narratives (e.g. Priestly, 2001). Whilst this work addresses some of the concerns raised, it still however configures impairment and disability as separate entities, perhaps in a dialectical exchange, but not interconnected. Continuing to separate nature and culture may address the dichotomy between able and disabled, but it does not get to grips with the false distinction made between normal and abnormal bodies, which as Hughes & Patterson (1997) argued continues to keep nature and culture apart. The dialogue between Thomas and Corker (2002) illustrates the current position on the social model, which crudely speaking is caught in a struggle between modern or postmodern analysis. Thomas, who describes herself as a materialist feminist and sociologist, believes that impairment should be included in three ways:

> 'First, the personal experience of living with impairment and impairment effects has to be acknowledged and understood. Second, impairment should be theorized as a biosocial phenomenon. Third, there should be an analysis of the similarities and differences in disability experiences associated with the full range of impairments' (p. 24).

The first reason reiterates the argument of bringing the body back into the social model, and the second acknowledges the interaction between biology and social structures. However, both disability and impairment are still constituted as separate entities. In other words, as Corker's contribution insists the categories are not broken down and the space between the dichotomy is not conceded. Yet, the third reason highlighting the heterogeneity of disability and impairment experiences calls for the inclusion of multiple voices. However, without the inclusion of the social practices of being both disabled and impaired, it is

difficult to imagine where such voices will be communicated from. Moreover, a capitalist mode of production that values and enforces the conception of able-bodied is part of the affects of both disability and different experiences of impairment, but other factors such as not understanding divergent perspectives, fear of the unknown, aesthetics, and dominant language forms are also part as well. Given such complicated interactions, I am not convinced that searching for the root cause of disability is possible. Ontologically, disability appears to be contingent, although clearly the effects of being disabled are to a large extent shared collectively. This mirrors Corker's position (Thomas & Corker, 2002). She describes herself as a post-structuralist feminist and sociolinguist, who not denying the oppressive effects of capitalism insists on a dialogue that engages with difference and social practices. She believes that people with physical impairments overly concerned with structure and the built environment have dominated disability theory. As such, she is troubled over Oliver's (1996b) suggestion that a social theory of impairment should be developed separately from the social model of disability.

> 'My worry is that if the social theorization of impairment is carried out in this way, and is conducted within the modernist dichotomies of mind/body, individual/society and structure/culture, for example, what will happen is what, historically, has always happened. There will, given the current privileging of the physicality of the body in sociology and related disciplines, be a sidelining of cognitive impairments accompanied by an erasure of sensory impairments' (Corker in Thomas & Corker, 2002 p. 29).

In other words, the social model is not always applicable to all impairments and disabilities and therefore denies difference. Furthermore, disability is seen as acting upon the blank surface of 'the impaired body', which does not leave room for a dialogue that explores the interrelations between specific impairments, disability, and the dominance of normality (Corker in Thomas & Corker, 2002). Impairment for Corker is situated within the hegemony of normality, as is disability. What she seems to be searching for is something akin to bell hooks (1990) notion of 'yearning', a shared space that 'opens up the possibility of common ground where all these differences might meet and engage with on

another' (p. 13), but at the same time retain their distinctions. In the same book, Tremain (2002), applying a Foucauldian analysis to disability (e.g. Foucault, 1973, 1979), takes this a step further. She points out that the disciplinary division of nature and culture has been reproduced in the social model's separation of impairment. And that

> 'In short, impairment has been disability all along. Disciplinary practices in which the subject is inducted and divided from others produce the illusion of impairment as their 'prediscursive' antecedent in order to multiply, divide and expand their regulatory effects' (p. 42).

Thus, even in the social model, disability and impairment remain conditions of each other because the categories serve to justify the ordering (see also Shakespeare & Watson, 2002). Butler (1990) makes the same point in relation to sex and gender. The social classification of disabled people is based on a distinction of normality that presumes a bounded notion of 'the body'. If instead we change the way we think about 'the body' and see instead that all bodies are fluid (e.g. Butler, 1993), then disabled people with impairments can be valued as themselves and not as discarded others. What is needed is not an either/or separation of disability and impairment but instead an and/both configuration that recognises the implicit relation between the two terms, which at the same time are unequivocally part of the construction of ability and non-impairment. But getting to grips with this notion of fluid bodies is not easy. Bordo (1990) for example felt that it negated corporeality.

> 'What sort of body is it that is free to change its shape and location at will, that can become anyone and travel anywhere? If the body is a metaphor for our locatedness in space and time and thus for the finitude of human perception and knowledge, then the postmodern body is no body at all' (p. 145).

The difficulty lies in the and/both configuration. If the mind and the body are included together then they *can* travel anywhere through flights of imagination etc., at the same time there is a materiality and of course spatial/timeliness to bodies that *grounds* them. Different aspects of gender, ethnicity, sexuality, disability etc. matter, there is never 'no body' because it is always present. But there is indeed no such thing as 'the body' because this implies an unmoving and

thus false corporeal configuration. Rather, there are 'bodies' and 'my body'. There are individual limitations to 'my body', which may stem from discrimination or from personal capacity, but collectively 'bodies' span an incredible array of possibilities. Containing this diversity in the phrase, 'the body' serves to disadvantage people with bodies that are considered to be abnormal.

Geography and disability[6]

Despite the extensive theorisation of disability, consideration of such experiences has in the past been a neglected aspect of human geography. There were sporadic appearances. For example Mayer (1981), situated within a medical model, used geographical techniques to investigate the incidence and thus possible causes of multiple sclerosis. Hahn (1986), following an American human rights perspective, concentrated on disabled people's negotiation of the built environment in Los Angeles. In the 1990s however, a number of researchers influenced by the development of the social model began to include work that linked geographical concerns with those of disability theory (e.g. Imrie & Wells, 1993). An exchange in *Transactions* also mirrored debates in disability theory over materialism and representation, beginning with Golledge's (1993) suggestion that geographers should apply their knowledge of spatial arrangements towards solving some of the problems of inaccessibility that many disabled people experienced; in particular, blind and vision-impaired people like himself. This could lead to the development of a geography *of* 'the disabled' and a geography *for* 'the disabled', which would provide insights into spatial theories whilst also addressing inequalities. In response, Butler (1994) stressed the need to consult disabled people and to include or at least be open to different interpretations of spatial knowledge that did not, as Golledge appeared to, position disabled people as lacking 'normal' responses (see also Golledge, 1994). Joining this debate, Imrie (1996) warned against an ableist geography that focused on the problems of disability rather than on unequal power relations.

[6] Park, Radford & Vickers (1998) provide a comprehensive review of human geography literature concerned with disability.

Critiquing Golledge's contribution, which he felt situated disability individually rather than socially he proposed that

> '...a geography with the disabled must be derived from a critique of the socio-political and institutional structures of ableism, in which spatial relations are conceived of as both disabling and disablist' (p. 402)

Gleeson (1996) continued the exchange by reiterating the social model's contention that disability refers to the barriers and restrictions placed upon people who have particular impairments, and not as Golledge seemingly believed a functional limitation. Thus for Gleeson (1996)

> '...it is wrong to think of this space, as Golledge does, as a separate, unknown world, sourced primarily in the warping power of the individual's bodily limitations. Rather, the social space of disability must be seen as coextensive with the whole human landscape which produces and transforms the general structures that oppress and devalue impaired people' (p. 394).

In a final rejoinder, Golledge (1996) categorically refuted the criticisms, pointing out his own disability and personal knowledge of visual impairment, which he continued to assert could be considered a burden that would benefit from practical solutions. This exchange serves as a reminder that whilst socio-political aspects of disability are important the practices of living as a disabled person are also significant. In addition, the difficulty of language and the primacy of binaries were also highlighted. Articulating different perceptions and experiences without contrasting them to a normative notion is very hard, because often there is no other language available. Indeed geographers need to be part of the process that encourages new ways of communicating spatial differences in relation to different bodies (see also Parr, 1997a).

Geographers have also responded to disabled feminist concerns about the role of embodied experience. Butler & Bowlby (1997) suggested that like body and society so impairment and disability should be seen as 'reflexively related', as

> 'This would allow political space for the acknowledgment of differences of experience and interests amongst impaired and disabled people as well as maintaining an emphasis on the importance of 'society' – of power

relations and of social discourse – in structuring those differences' (p. 418).

The social discourses they highlighted included medical classifications, but also the notion of 'Otherness', and the equation of beauty with goodness. This view of disability and impairment highlights the fluidity of corporeality and the complexity of body identities, and captures the lively array of experiences hidden beneath the notion of abnormality, and is similar to work by Corker & French (1999). This work, along with others (e.g. Dyck, 1995; Parr, 1997b; Gleeson, 1998), signals an increasing interest in the application of geographical analysis to disability theory, which chimes well with the recent inclusion of bodies as spaces (e.g. Nast & Pile, 1998; Butler & Parr, 1999; Teather, 1999a; Longhurst, 2001). Spatial organisation can restrict disabled people when the material environment is based on a normal paradigm of 'the body'. Not only does this keep disabled people 'in their place', it also reminds disabled people of their lack of fit, as 'out of place' (Kitchin, 1998a). Politically therefore the negotiation of space is a vital area for disabled people (see also Imrie, 2000). Human geography can further the theorisation of disability, for as Gleeson (1999a) has pointed out 'disability is a profoundly socio-spatial issue' (p. 388). Geographers are well aware of how space constructs identity as well as society and therefore can understand the importance of embodiment as well as a historical and materialist analysis, which in a disability context combines the social model with considerations of impairment (Gleeson, 1999a). Equally disability theory can further geographical understanding by illustrating that a material interpretation of 'the body' in geography is as important as its representation (Hall, 2000). As these debates shift and leak across disciplinary boundaries so the social model of disability can be enhanced (e.g. Freund, 2001). Furthermore, a framework that combines both geographies of disability and an embodied social model of disability refuting the negativity of dualisms can be further developed.

Despite the complexity of this configuration, there is another aspect of disability that is also important, namely technology, which is often referred to and debated over, but as yet has not really been incorporated into the theorisation of disability. For like embodiment, technology can be seen to be part of the medical

model of cure and rehabilitation, where disabled people are viewed as abnormal and machines are employed to correct corporeal deviations. Engagements with technology however, can be more than disciplinary techniques aimed at the normalisation of impairment. People can be intimately and emotional connected to their attachments that ultimately may become part of being someone.

> 'I love my wheelchair, a compact electric model called a Quickie P100, and I've spent so much time in it, and become so adept at manoeuvring it, that I have literally incorporated it - made it part of my body - and its least ailments sends me into a greater tizzy than my own headaches' (Mairs, 1996 p. 46).

As Grosz (1994) has argued,

> 'The limits or borders of the body image are not fixed by nature or confined to the anatomical "container", the skin. The body image is extremely fluid and dynamic; its borders, edges, and contours are "osmotic" – they have the remarkable power of incorporating and expelling outside and inside in an ongoing interchange' (p. 79).

To illustrate the personal nature that can be attached to external objects, she used the examples of clothing and jewellery. I would add that prosthetics, wheelchairs, hearing aids, and other artefacts of disability, directly pronounce this interaction due to their immediacy for social participation, and their embodied intimacy. As disabled people are constantly engaging with a variety of aids and enabling equipment, so technology is often implicit in the practices of being disabled. Any consideration of the corporeal and also the social, as actor-network theory has suggested, needs therefore to acknowledge the importance of nonhuman others.

Actor-Network Theory

For Bruno Latour (1986,1987), a true account of science and society involves connections which can be revealed through an examination of the actors and networks that lead to the accumulation of knowledge that is deemed to be scientific. Instead of analysing the final product, the invention, the theory, he followed the things, concentrating on the people, the places, the artefacts, and the animals. That is, all the actants involved in the process of becoming science. At

the same time, he stressed the translations and transformations that constantly occur, both at the moment and later on.

> 'Most of the difficulties we have in understanding science and technology proceeds from our belief that space and time exist independently as an unshakable frame of reference inside which events and places would occur. This belief makes it impossible to understand how different spaces and different times may be produced inside the networks built to mobilise, cumulate and recombine the world' (Latour, 1987 p. 228).

Connections are constantly in motion, full of things traversing mad pathways, both logical and illogical; the deeper or more intense our enquiries the more we uncover. Science conceived in this way can be used as a metaphor for all knowledge, indeed all things. Not linear points to points but relational co-existences, with both humans and nonhumans, fluidly connected. However, in the west, these assemblages are not fully recognised because they refute the basis of rational thinking upon which the western notion of knowledge is predicated. This 'modern constitution', as Latour (1993) called it, structures the world as a series of oppositions, ignoring anything that doesn't fit within these dichotomies. Hence, the mind is separated from the body, nature is excluded from culture, and the inside can never be the same as the outside. Functioning as an interlocking maze, differences of gender, ethnicity, ability etc. are mapped onto these binaries, hence perpetuating indeed constructing oppression (Plumwood, 1993). One half of the dualism is always disadvantaged over the other, as the opposing poles are ranked as either privileged or suppressed (Grosz, 1994). Thus, the binary between ability and disability is centred on the notions of normality in relation to corporeality. First, there is an assumption that disability whilst unnatural is still biological and not social, economic, historical, spatial etc. (Davis, 1995). Second, abnormality is seen as distinct from normality despite the impossibility of one term existing without the other (e.g. Derrida, 1978; Linton, 1998). Third, normality is never a neutral term that distinguishes an average but rather is a value judgement that equates abnormality with corruption and monstrosity. A commitment to equality therefore, necessarily involves challenging this dichotomous domination, in particular, the inevitability and naturalness of dualisms needs to be exposed as conventional.

Technology is an important component in Latour's (1993) analysis because as technology advances so he believes hybrid forms, or quasi-objects, the middle stuff that comes in-between opposing poles, proliferates rapidly. Specifically the interaction between humans and nonhumans is becoming more explicit through for example the use of computers. This threatens traditional binary forms of understanding. Questioning the differentiation of nature and society, in turn, shakes the foundation of incorporeal knowledge. Bodies cannot be separated from minds if connections are acknowledged. Latour's emphasis on connectivity, plus the work of Callon, Law, and others, grouped together under the term actor-network theory (ANT), centrally recognises the importance of associations (see e.g. Murdoch, 1997). Rather than prioritising human aspects, ANT highlights the involvement and incorporation of other things:

> 'It is suggested, in particular, that power is effected through the production and reproduction of a network of heterogeneous 'actants', this term being employed to suggest that both humans and non-humans are to be included in any analysis' (Hassard, Law & Lee, 1999 p. 388).

For example, Michel Callon (1986) when describing attempts to improve scallop-fishing yields in an area of northern France included not just the analysing scientists and foraging fisherman, but also the scallops as part of a complex network of associations (see also Latour, 1999a). This was not a rigid network that has specified pathways, but rather a network that incorporates possibilities and numerous dimensions (Latour, 1997). This sort of inclusion accentuates the variety of sources leading to the composition of knowledge. Moreover, it discloses the social as more than just social as the incorporation of nonhumans highlights the presence of other configurations, including for example the technical and the natural (Law, 1991).

> '...the key dividing line between those objects we choose to call people and those we call machines is variable, negotiable, and tell us as much about the rights, duties, responsibilities and failings of people as it does about those of machines' (Law, 1991 p. 17).

Clearly, therefore the constitution of the social is constructed and maintained by things that co-contribute, as social relations are created through the material world, which in turn is 'mediated through objects' (Law, 1992).

> 'If human beings form a social network, it is not because they interact with other human beings. It is because they interact with human beings *and* endless other materials too' (Law, 1992 p. 382).

This highlights the fallacy of binaries, as they can only ever be part of each other, connected through a network.

> 'Actor networks are the chains which give rise to natural and social realities, realities which can only be understood a stabilised sets of relations which allow the construction of centres and peripheries, insides and outsides, humans and nonhumans, nature and society, and so on' (Murdoch, 1997 p. 743).

Relating back to Latour's emphasis on different times and different spaces, nothing is finalised or stable because connections are constantly made and unmade in a multiplicity of ways with a plethora of things.

> 'The objects we study, the object in which we are caught up, the objects which we perform, are always more than one and less than many' (Law, 1999 p. 11).

Things can't be studied or shouldn't be understood in isolation, as they become meaningless once they are removed from their associations. As such, both objects and people are mutable.

> '...in ANT entities, things, people, are not fixed. Nothing that enters into relations has fixed significance or attributes in and of itself. Instead the attributes of any particular element in the system, any particular node in the network, are entirely defined in relation to other elements in the system, to other nodes in the network' (Law, 2001 p. 3).

Serres & Latour (1995) described the spaces of ANT as crumpled, where distance and proximity is contingent upon the network.

Linked to these notion of connectivity and crumpled space, is Deleuze & Guattari's (1988) 'line of becoming', where rather than an arboreal model of branching hierarchy concerned with origin of descent, they suggested instead the concept of a rhizome system of interconnections, disconnections and entanglements.

> 'Any point of a rhizome can be connected to anything other, and must be. This is very different from the tree or root, which plots a point, fixes an order' (Deleuze, 1993 p. 29).

Rhizomes convey the movement of associations better than the image of a network, which may be constrained by preconceived images of social networks that are often perceived as rigid, hierarchical, and serving to exclude. Indeed Latour (1999b) has suggested a combined 'actant-rhizomes' approach as this emphases a more flexible understanding of relations (Law & Mol, 2001). Being multiple, adding the notion of rhizomes, provides the possibility of new configurations of both knowledge and 'the body' (e.g. Martin, 1997). There is no essential body, it is not about being one thing or another, rather it is about assemblages and effects (Doel, 1996); where folding and unfolding is continuously operating in a flow of movement that cannot be reduced back to an essential beginning (Deleuze, 1993). As Dewsbury (2000) suggests

> 'Thus, to take Delueze's empiricism forward into human geography we need to focus on relations by thinking space in-between things. We need to look at the conditions, transformations, and distributions of relations actualized within the social world' (p. 127).

Technology and nonhumans are part of connections, as also are the practices and effects that provide the links and tangles. This configuration can be useful in the reconceptualisation of disability, as rather than being classified as either a normal or an abnormal body, within this system there are instead bodies, elements, things, that are unbounded and without a beginning or an end. As Ingold (2000) points out, this means that each person is 'a site where generation goes on' (p. 142). This I think can refer to the lack of an inherited natural being[7], as well as highlighting the associative possibilities of existence. Thus in relation to impairment, rather than it being against nature, it becomes an aspect of many natures which includes the supposedly unnatural; in terms of both different human forms and also nonhuman animals and machines.

[7] Referring to disabled people who do not have disabled parents, but also to the denial of a natural heritage that within the dominance of normalisation is believed to be true of particular bodies.

Running parallel, sometimes joining but never quite merging with these notions from ANT and Deleuze & Guattari, are the voyages of Donna Haraway. Focusing on gender relations and the obvious but in many ways hidden involvement of animals, she has explored and emphasised the complexity of knowledge production (Haraway, 1989). At the same time, and unlike some aspects of ANT, she stressed the continued importance of inequalities. Thus for Haraway, challenging traditional science involved the identification of connections, but also an examination of categories such as gender, ethnicity, class, and humanity, not as essential identifications but rather as heterogeneous experiences that are connected through the politics of struggle (Haraway, 1991). Introducing the notion of 'situated knowledges', she highlighted that whilst perspectives in reality are fluid and partial, nevertheless interlocking dualisms have structured and perpetuated the notion of universal experience (Haraway, 1991). Binaries therefore are not without influence or consequences. She suggests instead a notion of 'embodied objectivity', which is

> '...about limited location and situated knowledge, not about transcendence and splitting of subject and object' (p. 190)

From a disabled perspective, situated knowledges would include the heterogeneity of disability, and also articulate a marginal collective space. At the same time, an embodied objectivity captures the connection between having impairments and being disabled, where both social and personal aspects interact.

> 'Feminist embodiment, then, is not about fixed location in a reified body, female or otherwise, but about nodes in fields, inflections in orientations, to responsibility for difference in material-semiotic fields of meaning' (Haraway, 1991 p. 195).

The idea of situated knowledges appears to be similar to that of a rhizome system as both are about multiplicities and nodes, however rather than the Deleuzian - Guattarian 'lines of flight' the attachment of location, i.e. 'situated', grounds the concept and so makes it more real. Situated knowleges are about resonance not dichotomies, where reverberations of past knowledge, past relations continue to impact upon the network of associations (Haraway & Goodeve, 2000). Just as the technical is connected to the social, so the cultural is connected to the natural, ad infinitum. Illustrating this instability with various figurations designed to cut

through dualistic categories, such as human/machine, nature/culture, Haraway began with the image of the cyborg, a hybrid,

> '...resolutely committed to partiality, irony, intimacy, and perversity...oppositional, utopian, and completely without innocence' (Haraway, 1991 p. 151).

Particularly pertinent in an age where technological advances have coupled organism with machine, cyborg imagery disrupted the presumed integrity of the body by subverting dominant notions, and in particular exposing the hybrid configuration of nature and culture. Haraway (1992) called this 'the promise of monsters', as the figures occupy the borderlands, the indeterminate spaces that are constantly in transition (Anzaldua, 1987). Similarly, the co-existence of animal and human in the coyote figure of Native American beliefs was also utilised by Haraway (1991) to signify the instability of the western subject, as the coyote is the trickster uncontained by tradition, hence fluid and unpredictable. The latest addition, OncoMouse, a real transgenic mouse created for use in cancer research, both natural and unnatural, simultaneously a living animal, a commodity, a tool, and an invention, also destabilised binary structuring by queering the distinctions between object and subject (Haraway, 1997). All these figurations transgress boundaries, defiantly not categorically linking humans and nonhumans

> 'Valid witness depends not only on modesty but also on nurturing and acknowledging alliances with a lively array of others, who are like and unlike, human and not, inside and outside what have been the defended boundaries of hegemonic selves and powerful places' (Haraway, 1997 p. 269).

However, as Whatmore (1997) points out, whilst Haraway's notion of hybridity

> '...successfully disrupts the purification of nature and society and the relegation of 'nonhumans' to a world of objects it is less helpful in trying to 'flesh out' the 'material' dimensions of the practices and technologies of connectivity that make the communicability of experience across difference, and hence the constitution of ethical community, possible' (p. 47).

There is indeed something curiously incorporeal about Haraway's work, partly because it relies on metaphors, which if grounded lose their ability to perform. But also, because specific practices and ways of becoming that relate to actual bodies, and the personal experiences of people who are engaged with overt nonhuman connections, are not explored in any great depth. As Dorn (1998) points out

> 'While many of Haraway's readers may have been shocked to realize the extent to which we each operate as cyborgs these days, it could be argued that this association would come as no surprise to disabled people, who throughout this century have found themselves wrapped tighter and tighter into the expanding bio-medical industrial complex' (p. 185).

In other words, despite OncoMouse's use in cancer research, and cyborg reality being located in prosthetic replacements for various impairments, Haraway fails to include any analysis of disability, yet extensively acknowledges gender and racial oppression (see also McCormack, 1999). This is especially troubling in the face of her subject matter. Haraway's metaphorical explorations conceal the reality of bodies, the actual fleshes that have long been considered monstrous. Haraway (1997) is clearly aware of these corporeal operations as she specifies them in relation to racism. So why relegate disability to the subtext, why leave it unstated? The resolution of abnormality as defined through normality, is not an escape from dualisms but a continuation, an entrenchment that is all about cure and rehabilitation. Discourses of monstrosity have been attached to disability and continue to influence the perception of disability. This needs to be acknowledged if such alternative figurations are going to be employed. Whatmore (1997) suggests that for a number of reasons, Latour's notion of networks are 'more suggestive for elaborating a relational understanding...' (p. 47). One, it liberates nonhumans from the position of mere objects. Two, it 'fleshes out' the connectivity between humans and nonhumans. Three, it does not depend on a bounded concept of space but rather highlights fluid mobility[8]. Whilst Whatmore (1997) is specifically considering animal geographies, it is possible to also relate these three aspects to disability. First, it is the case that disabled people may be transfigured and transformed by their attachments to various embodied

[8] See also Whatmore (1999) & (2002).

technologies and these 'things' may not always be considered to be just objects. Second, devices designed to aid specific impairments do not exist in isolation from other machines. Finally, if space, especially corporeal space, can be seen as fluid then the distinction of abnormality can be broken down and exposed as temporal and contingent upon context.

ANT and disability

Certain writers, especially John Law, Ingun Moser and Annemarie Mol, have applied ANT to different aspects of being sick or disabled. Their work has resulted in some interesting propositions that relate very strongly to geographical concerns with the notions of mobility and corporeality. For example, in a comparative exploration of anaemia in Africa and the Netherlands, Mol & Law (1994)[9] highlighted the diversity of elements involved, including different normative expectations, the general constitution of human blood, diagnostic devices employed, and the people - as patients, as healthcare workers and as laboratory technicians. From these inclusions, they observed that anaemia is not something that has a specific location that can be pointed to, but rather has to be localised as a topology. Facts such as there is 'hardly any anaemia in the Netherlands' but 'in Africa there is a lot' are complicated, because the accepted normal level of haemoglobin differs in the two regions, also the machines which measure the level are more prevalent in the Netherlands and so the diagnosis is often made by different means. Thus, having low haemoglobin, the machines used in connection with the condition, etc. are all mutable aspects of anaemia. From this exploration, Mol & Law (1994) developed the idea of fluid space[10]. Not so much a new way of conceiving space, but an addition to existing understandings, where

> 'The social inhabits multiple topographies. There's one that is regional and homogeneous, which distinguishes its object by talking of territories and setting boundaries between areas. There's another that comes in the form of networks, where similarities have to do with syntactical stability

[9] See also Mol (1999).

[10] Also see Law & Mol (2001).

> and differences reflect grammatical dissimilarity. But there are others, and one them is fluid. For there are social objects which exist in, draw upon and recursively form fluid spaces that are defined by liquid continuity. Sometimes fluid spaces perform sharp boundaries. But sometimes they do not – though one object gives way to another. So there are mixtures and gradients. And inside these mixtures everything informs everything else – the world doesn't collapse if some things fail to appear' (p. 659).

In fluid spaces, rather than borders, there are mixtures that are flexible and able to travel, permitting the translation and co-existence of things. Thus

> 'In a fluid space normality is a gradient rather than a cut-off point. When they deal with anaemia, tropical doctors aren't trying to reach a specific threshold, but to nudge the Hb level in the right direction. To push it up a bit. And much the same is true for the person of the patient. A doctor may base her medical decisions on findings from places located far beyond the patient's skin. Or, to put it differently, a person overflows her surroundings, and she does so in ways that are quite unpredictable.' (p. 659).

This notion begins to capture the complexity of identity where belonging is a multi-levelled thing. At the same time, if applied corporeally it can highlight various dimensions of being – as a solid form, able to feel oneself as present; as a connected entity, able to know others and the affects and effects of them; as a fluid thing, able to create infinite possibilities. Differences are expected. Indeed, they are integrally part of this reconfiguration of space. With respect to the theorisation of disability, because normality is 'a gradient rather than a cut-off point' then having an impairment can be both normal and abnormal simultaneously, not an either/or thing but an and/both. As Corker (1999b) has written

> 'In their everyday 'talk', disabled people often allude to a complex existence that occupies the space between health and illness, disability and 'normality', impairment and empowerment and nature and culture to give a few examples. However, disability theory continues to dichotomise

these things in a way that does not permit exploration of the space between' (p. 633).

A configuration of connectivity is different because it ultimately lacks containment, and so binary divisions do not fit within networks, as

> 'Objects, entities, actors, processes – all are semiotic effects: network nodes are sets of relations; or they are sets of relations between relation. Press the logic one step further: materials are interactively constituted; outside their interactions they have no existence, no reality. Machines, people, social institutions, the natural world, the divine – all are effects or products' (Law & Mol, 1995 p. 277).

Moreover, these networks, or semiotic effects, may be more like a 'patchwork' than a structure. Instead of stressing sameness or differences, connections can be seen as partial and not accomplished.

> 'But there is a third option. This is to go neither for overall links, nor to move to closed off, isolated and fragmented worlds. Instead, it is to ask about the possibility that there are partial connections. Partial and varied connections between sites, situations, and stories. This, then, is the patchwork option. It's to imagine that materials and social – and stories too – are like bits of cloth that have been sewn together. It's to imagine that there are many ways of sewing. It's to imagine that there are many kinds of thread. It's to attend to the specifics of the sewing and the thread. It's to attend to the local links. And it's to remember that a heap of pieces of cloth can be turned into a whole variety of patchworks. By dint of local sewing. It's just a matter of making them' (Law & Mol, 1995 p. 289-290).

This notion is akin to Massey's (e.g. 1992; 1994) conceptualisation of place as interconnected, but also specific. It can also incorporate hooks's marginal space, where 'to be in the margin is to be part of the whole but outside the main body' (hooks, 2000, p. xvi) and her desire for 'yearning', 'where differences might meet and engage with one another' (hooks, 1990 p. 13). Being disabled then is part of not being disabled, sometimes separate, sometimes together, but always related. Different impairments can be conceived in the same way, sometimes the same experience, sometimes distinct, but always part of an effect. Applying this

to hypoglycaemia, Mol & Law (1999) were able to attend to both the general aspects of diabetes diagnosis, and also specific individual practices and experiences of living with diabetes; combining social and embodied aspects of being ill.

The importance of specificities is a continual theme in John Law's ANT work, further illustrated through his collaborative work on disability and ill health[11], in particular drawing on the technological interaction of disabled people's mechanical capabilities. For example, Moser & Law (1999) focused on the lived experiences of a woman called 'Liv', who is physically disabled. They describe in detail the mechanical operations involved in her use of a wheelchair. Interestingly they explore not just the connections between materiality and the body but also indicate the fundamental link between disability and subjectivity. This has implications for the way disability is articulated, especially in relation to political struggles. Having documented aspects of Liv's life in relation to Moser's interview with her, Moser & Law suggest that Liv's life could be understood as a series of good and bad passages, where:

> '...good passages have to do with moving smoothly between different specificities and their materialities. Bad passages are about awkward displacements, movements that are difficult or impossible' (p. 205).

In Liv's case, an example of a good passage was the ability to communicate via a computer programme, whereas a bad passage was the pain and work involved in moving the cursor. Thus, lives in general can be understood as movements and actions that involve the body and materials in ways that are specific to time, place, and person. For Moser & Law (1999) therefore

> 'Dis/ability is about specific passages between equally specific arrays of heterogeneous materials. It is about the character of the materials which en/able those passages. And it is about the arrays which secure or don't secure them – like absent lifts' (p. 201).

Within this system, rather than having either a normal or an abnormal body, it can be argued that there are instead bodies, unbounded, fluid bodies that are connected to both humans and nonhumans. This encapsulates the heterogeneity

[11] See also Law & Singleton (2000a) & (2000b).

of associations configured in disability, but also includes the interaction between specificities, materialities, and corporeal ability. Thus, they included individual and embodied experiences of having a particular impairment and the effects of being disabled, whilst not collapsing into notions of abnormality. As Michael (2000) has shown, the human emerges through flows and relations.

> 'The body is in constant motion. Even at rest, the body is never still. As bodies move they trace out a path from one location to another. These paths constantly intersect with those of others in a complex web of biographies. These others are not just human bodies but also all other objects that can be described as trajectories in time-space: animals, machines, trees, dwellings, and so on' (Thrift, 1996b p. 8).

In a similar approach, Moser & Law (2001) conducted another study where they looked at a particular electronic communication system (Rolltalk) used by people with multiple disabilities. They again concentrated on the production of subjectivity, finding that there was a co-existence and interaction between the machine, the person, their abilities, and their limitations. The technology provided a voice to people without one, but also constrained their articulation through the boundaries of the computer programme, which in turn were connected to the corporeal possibilities of the user. Rolltalk limits performances by directing the possibilities available but at the same time provides the prospect of control to people with various impairments. Both of these studies highlight the associations between nature, culture, and technology, where humans intimately interact with machines individually and collectively. Indeed the idea of 'passages' conjures a moving world and mutable relations. However, designating them as 'good' or 'bad' falls back on binary thinking, which is at odds with either a network or a rhizomatic metaphor. Liv's good passage of being able to communicate via the computer may also be bad when the programme does not allow her to say what she wants to say. And what about indifferent passages, mundane passages, and the pleasure of overcoming infuriating passages?

Politics and human competences

Going beyond or certainly somewhere other than good and bad, highlights a number of problems when considering a relational perspective. First, viewing all

bodies as fluid and partial can in some ways negate the fact that inequalities exist and this quite plainly isn't true. The distinction between who is disabled and who is not disabled is of course real and has powerful consequences. In ANT, power resides within the connections and is therefore always part of the network (Law, 2002). This view however, does not explain why some networks achieve a dominant position in comparison to other possibilities. Attempting to account for this, Callon (1991) has argued that despite an arbitrary beginning some things become universal over time, which can make them hard to shift. Indeed in relation to bodies, the hegemony of corporeal normality is difficult to challenge, and as Star (1991) has pointed out, ANT writers whilst stressing interactions have sometimes side-stepped issues of unequal access, which limits the overall application of the theory.

> 'However, one of the features of the intermingling that occurs may be that of exclusion (technology as barrier) or violence, as well as of extension and empowerment. I think it is both more analytically interesting and more politically just to begin with the question, cui bono?[12] Than to begin with a celebration of the fact of human/nonhuman mingling' (Star, 1991 p. 43).

Any consideration of networks therefore has to include overarching political structures that are used to classify and order the separation of these relations, as

> 'A stabilized network is only stable for some, and that is for those who are members of the community of practice who form/use/maintain it. And part of the public stability of a standardized network often involves the private suffering of those who are not standard - who must use the standard network, but who are also non-members of the community of practise' (ibid.)

The seemingly irreversibility of some associations particularly where connections have become conventional can disadvantage disabled people. The spatiality of networks may be confining, permitting no outside and thus not allowing for difference (Lee & Brown, 1994). Within disability theory, this is an access issue, in terms of the social environment and technology, but also a

[12] For those like me with a limited understanding of Latin, from the website www.sacklunch.net/Latin, the translation of 'cui bono?' is 'for whose advantage?'

schematic issue where different bodies are not given legitimacy in all sorts of ways. Murdoch (1998) has highlighted two main spatial types found in networks, which he calls 'spaces of prescription' and 'spaces of negotiation'. The former is about regulation of normality and the latter is about resistance to such standardisation, both of which can occur in the same network. This emphasis allows for some flexibility in terms of whether things are wholly or partially connected and can be a useful addition for understanding the process of having an impairment and being disabled. Certainly, through medicalisation and dominant modes of spatial organisation, disabled people are corporeally prescribed, and yet through individual and collective efforts negotiate different ways of managing their lives. This highlights a central feature of networks; whilst they can be seen as confining and perhaps with some sort of border, in reality networks need to be recognised as fluid movements not 'discrete entities' (Thrift, 1999b). Focusing on specific aspects of various associations should not preclude the rhizomatic nature of connections.

A second problem with ANT is the lack of agency attributed to humans. Collins & Yearley (1992a & 1992b) have argued that as humans are producing ANT accounts then nonhumans are being included through a human-centred perspective, which goes against the proposal to include other things. Similarly, Pickering (1993) focused on the issue of 'intentionality' pointing out that as humans through their goals and aspirations are irrevocably different from nonhumans, networks therefore are not as homogeneous as ANT appears to argue. However, whilst it is true that being humans we can never totally escape from a human-centred perspective, nevertheless ANT does recognise the presence of other things within these limits and therefore includes notions of difference which can be used to challenge various oppressions (Callon & Latour, 1992). Furthermore, as Latour (1999b) has explained, ANT does not ignore intentions, but rather places them within the network as an integral part of actants.

> '...actantiality is not what an actor does...but what provides actants with their actions, with their subjectivity, with their intentionality, with their morality. When you hook up with this circulating entity, then you are

> partially provided with consciousness, subjectivity, actoriality, etc.' (p. 18).

In other words, as humans do not exist outside of relations so their goals etc. cannot be separated from their associations. One of ANT's strengths lies in the attention given to interactions, as rather than privileging human language ANT

> '...recognizes chains of translation of varying kinds and lengths which weave sound, vision, gesture and scent through all manner of bodies, elements, instruments and artefacts...' (Whatmore, 1999 p. 30).

Even so, as Thrift (1999a) has argued, human embodiment and certain 'human competences' such as emotions, memory and indeed language are not so easily reduced to 'the constituent elements of different networks' (p. 314). Returning to disabled bodies and their connections to nonhuman others, then clearly some artefacts of disability have in a way become part of bodies as they are providing access to a sense or capability. These connections are therefore both personal and *emotional*. By helping to provide access to an emotional experience, such as the joy of music or the thrill of speed, certain technologies can be part of the process of being someone. At the same time, technologies of disability also immediately mark disabled people as disabled because they illustrate the particularities of impairment and so determine other people's emotional responses. Thus, both the personal emotions encountered through being impaired, and the emotions attached to the interconnections between humans and nonhumans, are vital components of disability because disabled people are positioned by these feelings. *Memory* is also an important part of disability experience. Obviously like nondisabled people, memory is part of the construction of cultural narratives, ways of behaving, collective reminders etc., but for disabled people there is also the recollection of past oppressions and management of being considered abnormal. In addition, for people who become disabled there is the memory of the past self that is irrevocably changed. The importance of *language* is also an enduring feature of disability studies, as descriptions such as handicapped, invalid, dumb etc. all have negative implications for the portrayal of disabled people. Likewise, arguments over the terms 'disabled people', favoured in the UK, and 'people with disabilities', preferred in the USA and Canada, capture the

complexity of semantics[13]. In addition, different experiences are often difficult to articulate within the confines of languages based on the paradigm of a 'normal body'. Conveying noises as visual images is not easy in spoken languages[14] yet many D/deaf people experience sound in this way (see e.g. Laborit, 1998). Here again is the importance of politics, where valuing different experiences and allowing their contribution enriches our understanding of the world.

Summary

This chapter began with a brief introduction to literature from disability studies, outlining the development of the social model of disability. This model radically transformed the conceptualisation of disability from an individual and medical problem to an analysis of societal injustice and discrimination of disabled people, which in effect separated impairment from disability. Moving away from the body however denied the importance of embodied experiences, which many disabled feminists believed to be a vital component of disability. Different theories that included both subjective and objective aspects of disability were developed, but these configurations were still premised upon the distinction between disability and impairment and therefore limited any individual understanding of being *both* impaired and disabled. If disability and impairment are made into a binary, then the complex and heterogeneous nature of being corporeally different is concealed. Attempting to incorporate both of these perspectives, recent contributions have stressed a nature/culture interaction which has led to the development of an embodied social model, where the construction of disability through discourse and cultural representation are given due consideration alongside barriers to participation. Other theorists have however, continued to assert the importance of a materialist perspective. As this perusal indicates, what appears to be needed is a fluid conceptualisation of corporeality that enables both the simultaneity of impairment/disability as well as

[13] Drawing on the social model, in the UK, people with impairments are seen as being disabled by society and so the term 'disabled people' is used. In the USA, disability is theorised as a civil rights issue, and Canada has adopted a 'people-first' approach, so both use the term 'people with disabilities' (see e.g. Titchkosky, 2001).

[14] Noises can be conveyed as visual images beautifully and effectively in sign language, see for example Dorothy Miles signing her poetry. There is a written anthology (Miles, 1998) but no visual signed version is commercially available, although some poems were captured on camera in various TV programmes, such as See Hear, and form part of the Dorothy Miles Archive held by the British Deaf History Society.

normality/abnormality, which can incorporate both a materialist and cultural perspective.

The chapter then explored the inclusion of disability issues in geography, highlighting that geographers have also been influenced by the development of the social model and likewise have debated the importance of materialism and representation in relation to disability. Responding to both concerns about environmental space and unequal access, and to issues surrounding body space and the personal experiences of impairment, geographer's have illustrated the significance of a spatial perspective for disabled people, especially the inclusion of practices of being disabled and the meaning of particular impairments. In addition, as disabled people often engage with a variety of assistive equipment, the inclusion of technology and nonhuman others was also stressed.

The connection between humans and machines as both a network configuration and a rhizomatic assemblage were then considered. These notions of fluidity and multiplicity disrupt the integrity of dualisms such as human/nonhuman, mind/body, nature/culture, and furthermore can be used to show the impossibility of normality existing without abnormality, thus revealing that disability, as a negative experience is conventional rather than inevitable. Adding the notion of 'situated knowledges' values the perspective of disabled people and allows the inclusion of difference. However, such theories need to maintain a material focus as metaphorical explorations often conceal the reality of being disabled. From a disabled perspective, technology is often intimately connected and can both transfigure and transform corporeal space, which further highlights the fluidity of bodies. Focusing on Law & Mol's work that applies ANT to various aspects of disability, the diversity of elements associated with particular illnesses and disabilities and the subsequent development of 'fluid space' that shows normality to be a flexible continuum, was then explored. Here normality and abnormality were shown to exist together as a patchwork configuration that stresses the partial nature of connections between humans and between other things. This notion allows the inclusion of both individual experiences such as impairment and social constructions like disability and so can be a useful addition to the

development of an embodied social model. However, whilst ANT is a useful tool for analysis the importance of politics and power relations needs to be stressed more fully. Likewise, certain human elements, namely emotions, memory and language are also important considerations that cannot be ignored.

D/deafness, especially the concept of cultural Deafness, contains an interesting interaction between nature and culture, as Deafness is clearly constructed but is also premised upon notions of essential sensibilities. Moreover, D/deaf people intimately and routinely engage with a preponderance of assistive technologies, that are politically negotiated in relation to whether such devices feel Deaf, contribute to a narrative of Deafness, and promote the transmission of sign language. Consequently, D/deafness can be seen to be highly relevant to the application of ANT and the development of hybrid geographies. The next chapter therefore concentrates solely on D/deafness, highlighting specific spatial and technological relationships that D/deaf people encounter.

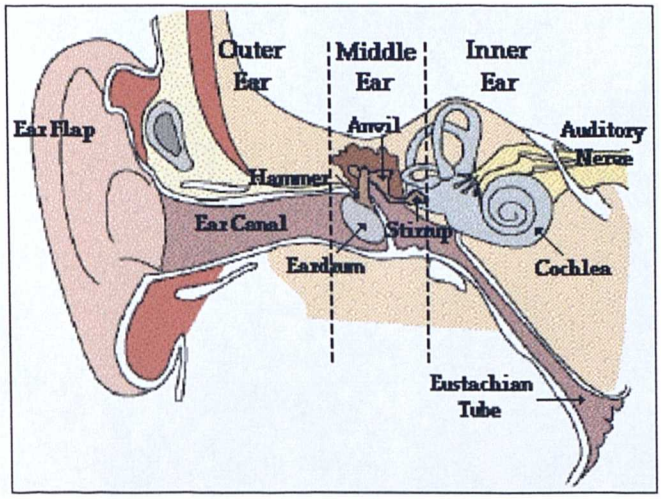
Chapter Three: The Construction And Practices Of D/deafness

From a medical perspective, deafness has been defined as a pathological condition, and so deaf people are seen as disabled in comparison to hearing people. This chapter begins with a brief overview of this construction and subsequent definitions of deafness. The arguments over whether deafness is indeed a disability or not are then considered and an alternative notion of cultural Deafness is introduced. The chapter then focuses on Deafness and illustrates in more detail the distinctive attributes of Deaf Community and Culture, a vital and important component of which is the use of sign language to communicate. Thus, British Sign Language and its inherent geographical nature are also introduced. As discrimination against signing and the consequent oppression against D/deaf people coupled with D/deaf resistance continues to inform and influence the present, the chapter also includes a brief history of Deaf spaces. Finally, specific technologies that D/deaf people are likely to use in conjunction with their D/deafness are described.

Medical deafness

Medically, deafness is an impairment of the auditory system that is understood through its anatomy and physiology. Figure 3.1 on the next page shows a typical representation of the anatomy of the hearing system. This system is divided into three spaces: the outer, the middle, and the inner. The outer ear is the flesh on the side of the head thought of as the actual ear; it also includes the channel leading into the skull ending at the barrier of the eardrum. On the other side of the eardrum, in the middle ear, are three small bones, the malleus, the incus, and the stapes, that are connected to the oval window. This window is attached to the cochlea found in the inner ear. Inside the cochlea is the basilar membrane that is joined to the organ of Corti, which is covered in hair cells that link to the brain via the auditory nerve (see e.g. Pickles, 1988).

Fig: 3.1 Diagram of the Hearing System



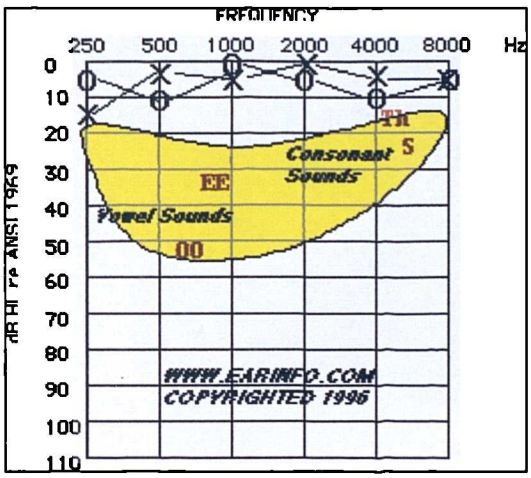
Source http://www.staff.Harrison.burg.k12.va.us/~gcorder/ear.html 6/2/03

The anatomy of the ear is complicated; the diagrams of it seem to reflect the shape of the fleshy ear, as shell-like, involving spirals, implying fluidity. Indeed physiologically, the system is highly interactive and reliant on mobility (see e.g. Browning, 1986). Interestingly, knowledge about the ear stems partly from observation of human physiology and anatomy, but mainly from work conducted on dead animals, e.g. guinea-pigs (Von Békésy, 1960), cats (Khanna & Leonard, 1982) and chinchillas (Robles, Ruggero & Rich, 1986). Thus, knowledge of the self is obtained from knowledge of the 'other'.

This understanding of the ear feeds into the pathology of deafness, resulting in two main medical definitions of hearing difference: conductive deafness where hearing loss stems from mechanical disparities, such as damage to the eardrum or bone fusing; and sensori-neural deafness where hearing loss is due to neurological reasons, such as impairment of the hair cells (see e.g. Martin & Grover, 1990; Newby & Popelka, 1992). Along with these two types, there are also exceptional differences such as discrepancies in brain function, and to provide a measure there is also 'normal' hearing, which ultimately defines deafness (ibid.). Thus compared against a standard of 0-20 decibels (dB's) deafness is a condition, as opposed to an illness or disease, typically diagnosed as a disability through an audiogram test, which measures the decibel threshold of

frequency range. At an audiology test the individual usually sits in a soundproof room with the technician and the audiometer (see e.g. Ballantyne & Martin, 2001). Pure tones (specific frequencies) are produced by the machine and conveyed to each ear in turn through earphones. When a sound is heard, the person being tested presses a button connected via a wire to the audiometer, and keeps pressing it until they can no longer hear the sound. Measurements corresponding to 'can hear' and 'cannot hear' at particular frequencies are then plotted onto a graph, and the shape of the resulting line indicates the type of deafness. Figure 3.2 and Figure 3.3 are examples of audiograms with typical voice frequencies (in the yellow area) superimposed upon them to indicate likely speech discrimination.

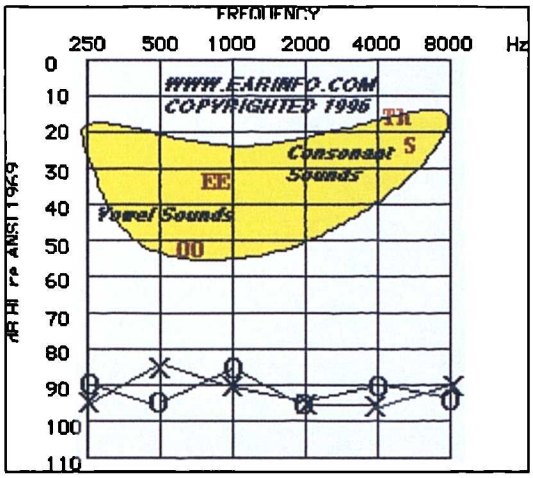
Figure: 3.2 Audiogram of a Normal Hearing Profile



Source: http://www.earinfo.com

Figure 3.2 above shows an audiogram of 'normal' hearing, where the line, with noughts and crosses indicating the volume of the frequencies heard in both the left and right ear, is almost straight and above the sound level of speech. Figure 3.3 on the next page is considered abnormal hearing as the measurements are all well below 0-20 decibels (dB), and are clearly outside the frequencies of speech sounds.

Figure: 3.3 Audiogram of a Deaf Profile, Severe/Profound



Source: http://www.earinfo.com

The level of deafness is calculated from the mean value of the better ear, in this case between 80-90+dB, and so classified as a severe/profound hearing loss, based on standard audiological categories given in Table 3.1 below.

Table: 3.1 Medical Categories of Deafness Based on Decibel Thresholds

Mean Hearing Threshold (Decibel - dB)	Medical Category of Deafness
25-40	Mild
41-70	Moderate
71-95	Severe
95+	Profound

Source: Martin & Grover (1990)

The number of people in the UK classified with these different degrees of deafness is difficult to obtain, corresponding to the fluid nature of deafness, with variables such as old age, health, temporality, and personal considerations all considerably affecting figures. At the same time, the political will to include both deaf and disabled people is somewhat lacking, for example, the Census would seem to be an ideal tool for assessing the self-defined disabled or deaf status of the population, yet such questions are not asked. Calculations based on the General Household Survey of 1998 for England and Wales, estimate that five

percent of women aged between 16-44 and 8% of men, rising to 41% of women and 53% of men aged seventy-five and over, are deaf or hard-of-hearing (ONS, 2000). Actual numbers can be obtained from local authority registers of deaf and hard-of-hearing people, as shown in Table 3.2 for 2001 (DOH, 2001).

Table 3.2: The Number of People Registered as Deaf or Hard of Hearing in England, by Age in Year Ending 31 March 2001

Number of people registered	Deaf and Hard of Hearing	Deaf
Under 18	6,877	3,988
18-64	52,628	12,586
65 and over	135,100	19,031
All ages*	194,840	50,282

* All ages includes some cases where age was not known therefore figures will not add to a total.
Source: derived from DOH (2001)

However, registration with a local authority is voluntary and often dependent on whether specialist services and equipment are available, therefore these figures are likely to under represent true numbers. In addition, only two categories of deaf or hard-of-hearing are recorded and these have no set definition. Based on two National Studies of Hearing conducted in 1985 and 1995, Davis (2001) estimated the percentage prevalence of hearing losses between 25+dB - 105+dB for the UK, which using Table 3.1 can be translated to estimated percentages of medically defined degrees of deafness, shown in Table 3.3 on the next page.

Table 3.3: Estimated Percentage of Medically Defined Degrees of Deaf People in the UK, aged 18-80

Degree of deafness	Estimate (%)
Mild	24.3
Moderate	7.1
Severe	1.1
Profound	0.3
Total	32.8

Source: derived from Davis (2001) p. 15

Combining these estimates with 2001 Census data, which gave the total population in the UK aged between 18-80 as 43,365,461 (www.open.gov.uk), the total number of deaf adults could be over 14 million, of which over 10½ million would be classified as having mild hearing loss; about 3 million moderately deaf; and approximately 600,000 severely or profoundly deaf. However, whilst medical categories serve as guides to deafness level, corresponding audiogram profiles and figures to what can actually be heard is difficult to convey. Decibel levels of different noises can be used as a comparative guide such as in Table 3.4. But this sort of comparison assumes a straight line of frequencies, as seen in the previous two figures. However, many hearing profiles don't follow this pattern.

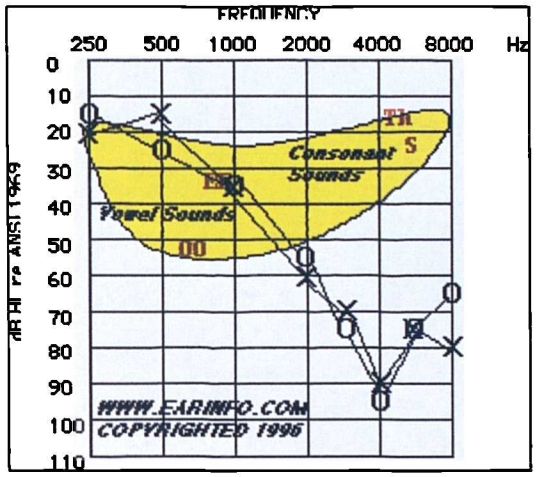
Table 3.4: Approximate Decibel Levels of Some Common Sounds

Example of sounds	Decibel Level (dB)
Rustling of leaves	30
Noise of distant traffic	40
Conversational speech	60
Inside subway train	90
Pneumatic drill	100
Jet airplane close by	120

Source: Martin & Grover (1990)

For example, a high frequency 'loss', as shown in Figure 3.4, can result in distorted sound discrimination. This deafness is classified as moderate, but at some frequencies, the deafness is profound whilst at others it is mild. Furthermore, audiogram tests use pure tone measurements, which mimic alarms and computer noises, but do not capture complex combinations such as those used in speech sounds. With high frequency 'loss', 'p' can sound like 'b', and 'ee' like 'oo' when the first part of the sound is not distinguished, which can limit conversational understanding.

Figure: 3.4 Audiogram of a High-Frequency Deaf Profile, Moderate



Source: http://www.earinfo.com

Additionally, hearing involves a vast number of other factors, such as the amount of background noise, familiarity of sounds, tiredness of the individual, and whether someone has a cold, etc. Classifications therefore act as guidelines rather than absolutes, although they can have a significant impact as they are routinely used to determine things like schooling and welfare provision. Additionally, as there is no cure for the majority of people with deafness, medical intervention is aimed at the amplification of sound through mechanical aids, namely hearing aids or cochlear implants, and these categories are used to establish the type and strength of the aids given. Thus, the medicalisation of hearing differences can be a major part of the experience of being deaf. Whether they are lived as identifications or rejected as oppressive constrictions, medical classifications are present in the biographical. They bear upon the embodied understanding of the

individual, affect the construction of social knowledge, direct technological interaction, and hence influence the spatial configuration of deafness. Yet, many Deaf people reject these classifications. Indeed, they may actively refute any connection between Deafness and disability.

Deafness is not a disability

The medical model of deafness has been criticised on a number of levels. Supporting the notion of bio-power and the employment of normalising judgments by the medical profession as suggested by Foucault (1977, 1979) the measurement of deafness, in particular the normal threshold of 0dB, has been shown to be an arbitrary construction, dependent on discrepancies in the age ranges used to determine the standard, internationally changeable, and falsely used as corresponding to experienced hearing levels (Noble, 1991). Although some medical conditions such as meningitis can cause deafness, Foucault's (1973) contention that modern medicine is more concerned with normality than with health is particularly apt when applied to deafness, as many deaf people, especially those born deaf, do not experience deafness as an illness. Indeed, deafness as a pathological condition and a disability can be rejected. Rather than being concerned with deafness as a medical condition, significance can be placed upon identification and involvement with Deaf people as a distinct community and culture (Padden, 1980; Jones, 2002). Being Deaf with a capital 'D' is related to hearing loss, but the level of loss is not particularly important (although most likely to be profound or severe), as Deafness is about attitude rather than physical limitations (Baker & Cokely, 1980). In a recent debate on VEE-TV[15], one woman explained that to her the term disability was always negative, with the 'dis' bit meaning 'can't', and so she preferred to call herself Deaf, as this denoted an identification that she was proud of. As Lane (1998) argues, the construction of deafness as a disability can restrict choices and serve to handicap D/deaf people, with the construction itself creating the disability, not the sensory limitation.

[15] VEE-TV is a television programme on Channel 4 designed for and presented by young D/deaf people. The programme often has a debate about current topics of interest. On the 20th April 2002, the topic debated was whether D/deafness is a disability or not.

> 'The loss of choices is largely the result of how our societies construct the concept of deaf - it is the result of audism - rather than of any sensory limitation that Deaf people have. In that sense, our societies largely create the problems of being Deaf' (Lane, 1998 p. 5).

An example of audism is when mainly hearing professionals make decisions *for* D/deaf people (Andersson, 1994). Moreover, audism (used like racism and sexism) denotes a phonocentric bias, an oppressive dominance of an audiological norm where being able to hear is assumed.

> 'Why is deaf associated with loss rather than difference and gain (different language, different culture, etc.)? I submit that's because the society that has elaborated the concept of *deaf* is largely hearing, and conceptualizes *deaf* as a loss of hearing. Indeed, the difference in hearing of a person born Deaf and one born hearing is called "hearing loss" although the Deaf person didn't lose anything' (Lane, 1998 p. 7).

The distinction between Deafness as something positive and gained and deafness as a loss and a disability highlights the complexity contained within, and simplified by, medical categories. Time is especially important, as the occurrence of deafness can be a crucial component in identification. Significance is often placed on whether deafness occurred prior to learning speech (congenital or before the age of two), known as prelingual deafness, or after learning speech, known as postlingual deafness. Individuals who have been deafened in adulthood, and hence are postlingual, typically view their deafness as hearing loss, as their conceptualisation of normal self has been altered (e.g. Ashley, 1991). This is, of course, reinforced by medical definitions. Nevertheless, a desire to return to a hearing self can be illustrated by the profiles of cochlear implant patients, where the vast majority of implanted adults are deafened (private communication National Cochlear Implant Users Association UK, 2000; see also Tucker, 1998). These notions of deaf and Deaf can highlight the complexity and interactions of nature and culture. The natural body as hearing is challenged by a definition of Deafness as cultural, but the identification of Deaf relies on its supposed 'naturalness' and rejection of being classified a disability.

> '...the separation of the biological and the social eventually became the basis of a distinction between biological deafness and cultural Deafness, even though Deaf people are both deaf and Deaf' (Padden & Humphries, 1988 p. 4).

Likewise, the construction of deafness as a medical condition is criticised for being a construction, whilst at the same time a cultural definition of Deafness without typical originators, such as geographical or genealogical lineage, is clearly a conscious identification based on a specific standpoint.

There *are* clear differences between being disabled and being Deaf. Disability rights are based on independence and autonomy, whereas Deafness is a promotion of community and interdependence with other Deaf people (Lane, 1995; Corker 2002). Indeed, as Lane (1995) goes on to explain, in areas such as education there are major ideological tensions.

> 'Solidarity, yes, but when culturally Deaf people allow their special identity to be subsumed under the construct of disability they set themselves up for wrong solutions and bitter disappointments. It is because disability advocates think of deaf children as disabled that they want to close the special schools and absurdly plunge Deaf children into hearing classrooms in a totally exclusionary program called inclusion' (p. 182).

Historically a Deaf identity has been fostered by separate schools for D/deaf children, educational integration can therefore been seen to work against both Deaf Community and Culture. Another crucial aspect of being Deaf is the use of sign language to communicate (for a deeper discussion of both of these issues see the following sections on Deaf spaces and BSL). Deaf Community and Culture are fundamentally based on country specific sign languages. Deaf people therefore can be seen as a linguistic minority who are excluded through a lack of sign language provision. This again separates Deafness from disability, as Ladd & John (1991) explain

> 'Many disabled people see Deaf people as belonging, with them, outside the mainstream culture. We, on the other hand, see disabled people as

'hearing' people in that they use a different language to us, from which we are excluded...' (p. 15).

Corker (1998, 1999a) has comprehensively explored these issues. As she points out, in Deaf politics, impairment is not separated from disability, yet the binary between individual and society implicit in the social model is reflected in the construction of Deafness as being opposite to hearing. Similarly, a normal and abnormal distinction is still being made even though it has been reversed (Corker, 1999a). Rejecting such either/or positions, Corker (1998) has also suggested a systematic *and/both* approach that is inclusive. Systematic however, implies organisation, something that is regular and logical, which seems more akin to rationality and somewhat excludes emotions and perhaps corporeality. Whereas a rhizomatic configuration allows for multiplicity and seems to be more in tune with the sort of shared space that Corker appears to be searching towards, something which interrogates and ultimately incorporates differences. Stressing inclusion, Corker also highlights the importance of discursive practices, which are downplayed in the social model of disability. For Deaf people, language issues are a paramount consideration, and fundamental to the oppression experienced. This discrimination Corker believes, is not just about the physical differences of communication, but also includes a sensory dimension, which simplistically is the missing bit in-between the dualism of mind/body, corresponding to classifications of mental or physical disabilities. In effect, disability theory focuses on the binary between nature and culture (impairment and disability) but does not always adequately address the distinctions between the perceived normal and abnormal 'body'. Difference can thus be subsumed into sameness, which undoubtedly benefits individuals but ultimately does not provide a collective challenge. Taking these ideas further, Corker (2001) has developed the notion of 'sensibility'.

> 'Sensibility is taken primarily to be the set of individual and collective dispositions to emotions, attitudes, and feelings that are relevant to value theory, including ethics, aesthetics, and politics. But since I will be arguing that an important material aspect of sensibility is sensation, sensibility is also used as a metaphor for the embodiment of these

dispositions, specifically in people who sense the world differently' (p. 36).

Sensibility is thus about being in the world. That troubling 'thing' that is difficult to articulate, but is linked to gut reactions, as well as feelings and rationalisations. Thus, being Deaf or indeed deaf is not the same as being hearing no matter what the context, nor is it the same as being mentally or physically disabled. This is an important point; Corker (2001) however privileges Deafness when she writes

> 'In an accessible physical environment, physical disability can disappear. But the social environment can never be rendered immutable in a way that accomplishes the disappearance of sensory disability and this, I would argue, is complicated by the alternative ways of understanding the basic elements of "reality" necessarily employed by people with sensory impairments. The sensorially impaired body is always in a state of dys-apperance because the normal/disabled binary remains intact' (p. 40).

I disagree. What about kinaesthetic sense? And even with an accessible environment, physical disabilities do not simply disappear. As Mairs (1996) highlights, the perspective, attitudes etc. of a person who uses a wheelchair are not always the same as someone who moves about without one. Sensibility needs to be included but not as a rigid construct. A fluid conceptualisation of disability and D/deafness includes this diversity. As Carver (1993) reminds us, there are many ways of attending to things.

> 'Parents may feel that their Deaf child is missing a lot in life, like being unable to hear dragonflies buzzing, the wind whistling through the trees or the roaring of a waterfall. Such regrets are unnecessary: the deaf child perceives things in a different fashion: the zig-zagging dragonflies iridescent wings vibrating in the sunlight, the breeze gently pulsating on the face with the leaves trembling high above, and the cool, white spray rising from the waterfall' (Carver, 1993 pp. 1-2).

In my view, both deafness and Deafness can be considered a disability because they are based on corporeal differences. However, I fundamentally dispute the standard definition of disability as inferior, as a loss or tragedy. D/deafness is a

part of me, and whilst aspects of being D/deaf are sometimes frustrating, overall D/deafness feels like a positive part of who I am. However, including D/deafness as a disability as well as a language minority is I think important because the interaction between nature and culture is so apparent when considering D/deafness, and so the experiences and practices of Deaf people can challenge traditional theorisations of disability *and* normality.

Being Deaf with a big D – Deaf Community and Culture

Being Deaf with a capital 'D', is about being part of a community with other Deaf people, about being proud to be Deaf (Padden, 1980; Padden & Humphries, 1988; Kyle & Allsop, 1982). Clear demarcations are made between the Deaf World or Community (DEAF-WAY in USA), and the hearing world (Erting, 1994; Lane, Hoffmeister & Bahan, 1996). Deaf Culture for example, expresses the beauty of sign language, explores past oppressions, and values present Community (Miles, 1988; Schertz & Lane, 1999-2000). Whilst a few D/deaf people are born into D/deaf families, most find their identity through Deaf schools or Clubs at various ages. For some people this journey can be tortuous, but ultimately joyous as they gain acceptance for who they are (e.g. Ladd, 1991). Ladd (1998, 2000) has developed the notion of Deafhood, the 'phenomenon of actualising one's Deaf identity', to express this process. In some ways, it is similar to 'coming out' as lesbian or gay in terms of recognising and embracing an identity which is different from the norm or birth family (e.g. Thomson, 1996), although there is a fundamental difference as family and friends will already know whether someone is deaf or not. Even so, for many D/deaf children of hearing parents, Deafness may involve a rejection of the oral education and beliefs that they have grown up with, and this can lead to conflict with their biological family (e.g. Laborit, 1998).

Indeed, this commitment and sharing is one of the main components of being a member of 'the' Deaf Community[16] (Kyle & Woll, 1985). Whilst little attention is paid to what can or cannot be heard, the majority of D/deaf people will have either severe or profound medically defined deafness. However, there are also a number of groups that occupy ambiguous positions. For example, some hard-of-hearing people have expressed a notion of double belonging.

> 'I do not belong solely in the world of the hearing nor do I belong solely in the world of the deaf. I am a part of both worlds and this has made me what I am today' (McCartney, 1981 p. 26).

> '...in my opinion it is the interplay between the person concerned and myself that decides the world to which I belong. Thus I feel that I belong to both worlds, although my everyday life is spent chiefly among fully hearing people' (Mikkelsen, 1981 p. 56).

Nevertheless, the term hard-of-hearing can also be seen as an unnecessary distinction based upon a hearing preoccupation with levels of loss, thus whether someone is D/deaf or hearing depends on their level of commitment to a positive construction of D/deafness (Padden, 1980); and to some degree, whether someone communicates in sign language or oral language. Yet, as Brueggemann (1998, 1999) explains, there is often slippage between being Deaf and being hearing.

> 'Asking the question are you Deaf or Hearing? Have to choose and took 10 years to come up with an answer of 'I am not Deaf. I am not Hearing. I am neither. But I am Both' (Brueggemann, 1998 p. 6).

Another group that can be both Deaf and hearing are hearing children of D/deaf parents (see e.g. Walker, 1986; Preston, 1994). Growing up in Deaf Community, fluent in sign language, such children may experience the dislocation of not knowing quite where they belong.

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[16] Deaf Community operates at various scales, thus there is a global Deaf Community (e.g. World Federation of the Deaf); a British Deaf Community (e.g. British Deaf Association); and various local Deaf Communities with their own Deaf clubs.

'I stepped between the deaf and hearing worlds never quite fitting into either, never knowing who I was. I was me when I spoke in my native tongue, the tongue of my hands' (Sidransky, 1990 p. 95).

'When I turned 18, my father took me aside. He pointed out the window and said [Here, the informant stopped speaking and began using sign language *"The time is coming. Soon you must go. That's your world put there. The Hearing world. You belong there."*] For 18 years I had grown up Deaf, and now all of a sudden I'm supposed to be hearing? I looked at him and said, [signs, *"What do I know about the Hearing world? I hear, yes, I speak, yes. But I thought I was Deaf."*] My father smiled and [signs *"True, you're Deaf, but you're hearing too."*] I grew up Deaf. I guess now I'm hearing. But some part of me still feels Deaf' (quoted in Preston, 1995 p. 1461).

Asian D/deaf people have also indicated that they have a dual heritage. And whilst the prevalence of deafness amongst Asians is quite high in the UK, Deaf Clubs and schools continue to reflect white culture (Ahmad, Darr, Jones & Nisar, 1998). Asian parents have expressed concern over this lack of representation and in particular, feel that sign language sometimes fails to provide ways of communicating diversity (Chamba, Ahmad, Darr & Jones, 1998). As one Bengali mother commented 'I send my child to [a Deaf] school and he comes back an Englishman' (Ahmad, Darr & Jones, 2000 p. 67). Lack of representation is also an issue for lesbian and gay D/deaf people, and extensive homophobia has been experienced (Taylor & Meherali, 1991) despite the inclusive stance adopted by the British Deaf Association in 1987[17]. As these different groups indicate, Deaf Community and Culture can be diverse, again indicating the multiplicity of identity. Even so, along with a commitment and sense of belonging with other D/deaf people, all of these groups share the use of sign language as their

[17] In 1987, the British Deaf Association, after a series of motions attempting to ban gay and lesbian D/deaf people from the BDA, adopted instead an inclusive policy opposed to such discrimination.

dominant mode of communication. And signing is seen as very different from speaking.

British Sign Language

> 'This, this is the voice from silent hands;
> This, this is the voice not heard, but seen
> Reaching across the empty space between
> Words, and the actions that the mind demands,
> When words are not enough; this is the gesture'
> (Miles, 1998 p. 5)

British Sign Language (BSL) is a manual communication system that uses the hands, but also the face[18] to convey meaning (see e.g. Kyle & Woll, 1985; Brennan, 1990).

> 'There's something primarily powerful about it, the way it engages all of our bodies and faces, its scope for storytelling, jokes and fun. I think anyone would be hooked if they had access to such intense communication experience' ('Martha' quoted in Ladd, 1998 p. 179).

The important components of BSL, indeed all sign languages are: Having a visual nature; the use of space (in terms of placement and movement); the ability to impart multiple meaning; the lack of written form; and its status as a minority language (Sutton-Spence & Woll, 1998; see also Taub, 2001). BSL is a highly visual language communicated mainly through sight[19]. This seems obvious but, as Harris (1995) explains, in reality involves a different way of looking.

> 'The main problem with learning to sign is that you have to overcome quite a lot of natural 'hearing' type behaviour. For example Deaf people stare at your face and upper body. This is quite uncomfortable for hearing people. We have natural periods where communication continues when we look away; we drop our eyes from the other's face...we have natural breaks in eye-contact gaze. Deaf people don't have these. If you behave

[18] The face, especially the eyebrows and the mouth are particularly important in sign (see e.g Braem & Sutton-Spence, 2001; and for examples of facial expressions BDA, 1992 p. xxiv-xxvii).
[19] Deaf/blind people communicate using a signed alphabet based on touch.

> in a 'hearing' way and drop your eyes they think you have finished and walk off!' (p. 299).

Non-signers have to develop a heightened sense of vision; they have to learn to attend to visual information. Signing also involves a different awareness of space. Sign is essentially a spatial language, and thus inherently geographical. BSL uses both topographic space and syntactic space (Sutton-Spence & Woll, 1998). Topographic space refers to the spatial arrangements of the real world. So, if I were to describe my house I would physically show the layout of the rooms as they actually exist. In contrast, syntactic space is contrived space that helps to establish meaning. Thus if I tell a story about myself and a friend, I would place my friend on my left and then point to that space when I referred to her (see e.g. Allbutt, Gray & Schofield, 1999). Along with this placement, movement also conveys different meanings and grammar (see e.g. Miles, 1988; Mc Whinney, 2001). For example, to sign 'I ask you' the sign ASK is made outwards from the body, in 'I ask her' it is made to the side, and in 'you ask me' the direction is inwards (see e.g. Klima & Bellugi, 1979). Similarly, bodies are used as locations for signs, so to KNOW is signed from the head, and to LOVE is signed from the heart. Another spatial feature of sign is the ability to communicate at a distance, which Thoutenhoofd (1998) describes very well.

> 'The deaf club is suffused with what to a cultural outsider would seem 'visual ambient noise' – like pubs are with aural noise. For hearing outsiders like myself, it often takes considerable effort merely to work out who is conversing with who in a room: sign language allows one to converse with somebody at the opposite end of the room, so the 'spatial' patterning of conversations taking place criss-cross all overseeable space' (p. 8).

Because BSL is conveyed with two hands, signers also have the ability to communicate multiple meaning. In sign, I can describe two separate things with different hands both at the same time. In addition, there is sometimes a single sign for more than one English word, for example DON'T LIKE. Conventionally BSL signs are capitalised to show that they are signed and not spoken. However, there is no written form of sign language, which further increases the importance

of Deaf Community and shared engagement. Furthermore, BSL is a minority language that despite resolutions calling for its recognition by the European Union in 1988 and 1998 has only recently received official recognition by the British Government[20]. The estimated figure for BSL users varies between 28,000 (EUD, 1997) and 50,000 (RNID, 2000), both of which seem like underestimates given that the number of severe or profoundly deaf people in the UK can be estimated as high as 600,000 (see p. 46 above). Numerous marches throughout the country, organised by the Federation of Deaf People (FDP), were held to publicise the omission of BSL[21], which given that Welsh, with approximately 580,000 speakers and recently Cornish with only about 2,000[22], were already accepted was seen as hearing discrimination. This attitude certainly reflects the historical oppression that D/deaf people have been subjected to under the auspice of oralism. The repression of sign language and Deaf Culture has been spatially performed. At the same time, resistance by D/deaf people through Deaf Community and the continuation of sign has also relied upon the creation of Deaf space. As such, the history of Deaf spaces continues to bear upon the present.

Deaf spaces

Early history of Deaf Education and Deaf schools

Mainly born into hearing families, D/deaf children were geographically dispersed until they were brought together through the development of Deaf education. The first systematic attempts to educate D/deaf children occurred in Spain in the sixteenth century when a Benedictine monk, Pedro Ponce de Leon (1520-1584) became a tutor to two deaf boys from a wealthy Castilian family (Bender, 1960;

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[20] Statement issued on May 18th 2003: 'The Government recognises that British Sign Language (BSL) is a language in its own right regularly used by a significant number of people...[estimate given as 70,000]...The Government understands that people who use BSL want their language protected and promoted in the same way some minority languages are by the Council of Europe's Charter for Regional or Minority Languages. The Council is considering how that might be achieved for indigenous sign languages. The Government will give careful consideration to any proposals which the Council might make' (quoted in BDN (2003) p. 4).

[21] See website http://www.fdp.org.uk.

[22] See Welsh government site (http://www.wales.gov.uk) and the Cornish Language Board (http://www.cornish-language.org). Welsh was officially recognised in 1967 and Cornish in 2002 (see Welsh Language Act and Hansard 13/11/02).

Plann, 1993)[23]. De Leon concentrated on teaching writing skills and articulation through feeling, where the children would match the resonance of the throat with specific speech sounds (ibid.). In the seventeenth century, another Spaniard Juan Pablo Bonet (1579-1620), continued to develop these visual displays of talking and in addition devised a 'finger alphabet' (Fischer & Vollhaber, 1996; Rée, 1999). Despite this early introduction of manual methods, the primary goal of teaching D/deaf people was to get them to speak. In the eighteenth century, the first exception to this oral dominance occurred in France when Abbé de l'Épée (1712-1789), concerned about D/deaf people's inability to confess and thus be accepted by god, devised a sign language based on the native signs of some D/deaf inhabitants of Paris, which he extended to include the grammatical principles of French (Lane, 1984a; Fischer, 1993). Based on his experiences of teaching D/deaf children he publicised this language[24] partly as a response to a barrage of criticism over his method of instruction (Rée, 1999). By the time of his death, he had helped establish twenty-one schools for D/deaf children throughout France (Sacks, 1991). The new director of De l'Épée's school in Paris, Abbé Sicard (1742-1822), continued to expand on the development of sign language[25], and from these beginnings, manual communication became known as the 'French method'. It was in direct contrast to the philosophy behind the 'German method', which following Arnoldi[26] was firmly wedded to oral instruction. The main figure here was Samuel Heinicke (1727-1790), who like De l'Épée, concerned about D/deaf people's spiritual salvation opened a school in Leipzig in 1778. He was however firmly against the use of signs, believing instead that D/deaf children should be weaned off their reliance on visual perception (Rée, 1999). He was in general secretive about his method of articulation, but unusually seems to have based it on the sense of taste, substituting various substances for the sound of individual letters (Bender,

[23] The propensity amongst nobles to marry cousins had increased the number of children born deaf, and as inheritance rights rested on their capacity to speak, the education of these children was a matter of some concern at this time (Rée, 1999).
[24] In 1776, De l'Épée wrote *Instructions des Souds et Muets par la Voie des Signes Méthodiques* (Instructions of Deaf and Dumb by means of Methodological Signs).
[25] In 1818, Sicard produced the *Théorie des Signes* (the Dictionary of Signs).
[26] In 1777, Arnoldi wrote *Praktische Unterweissung Taubstumme Personnen Reden und Schneiben zu Lehren* (Practical Instruction for Teaching Deaf-Mute Persons to Speak and Write).

1960)[27]. The French and German methods were seen as being in direct competition, and thus there was a contest between sign or speech.

In the UK, Thomas Braidwood (1715-1806) devised his own method of oral instruction, based on physically manoeuvring the tongue into the desired position for each letter (Bender, 1960). In 1760, he opened the first school for D/deaf children in Scotland, Edinburgh, and following a move to Hackney in London, also opened the first in England in 1792 (Jackson, 2001). Both schools followed the 'German method' concentrating on oral articulation and lip-reading and did not make use of sign language (Giangreco & Giangreco, 1970). The education of D/deaf children soon spread and other countries in Europe opened their own schools, for example, Russia in 1806, Denmark 1807, and Sweden 1809 (Bender, 1960; Eriksson, 1998). Meanwhile in the USA, there was a lot of interest over the development of Deaf education in Europe. Families with enough funds sent over their deaf children and interested educators visited the leading institutions (Lane, 1984a). In the early 1800s, Thomas Gallaudet (1787-1851) visited the Paris school and persuaded one of its D/deaf teachers, Laurent Clerc (1785-1869), to accompany him on his return to North America (Lane, 1984a; Valentine, 1993). Together in 1817, they founded the first school for the Deaf in the USA, named the American Asylum for the Education of Deaf and Dumb Persons, in Connecticut (Gallaudet University, 2001). Importantly this was the first time that a D/deaf person had been involved in establishing a school and Clerc also worked at the school teaching the children the French system of sign language taught to him by Sicard in Paris[28].

A Deaf State

Deaf schools were mainly residential and the experience of living together in dormitories soon inspired a desire for a geographical Deaf homeland. The most

[27] With A being pure water, E wormwood, I vinegar, O sweet water, and U olive oil (Bender, 1960).

[28] The initial French system brought over by Laurent Clerc eventually evolved into the present American Sign Language (ASL). Harlan Lane (1984a) provides an excellent biography of Laurent Clerc, outlining his influence on the development of American Deaf Culture.

famous example in Deaf history occurred in the United States when John Jacobus Flournoy's called for a Deaf State in 1855 (see Coulter, 1942; Van Cleve & Crouch, 1989)[29]. Flournoy's desire for a Deaf homeland appears to have been driven by an 1836 ruling by the State of Georgia, which stated that

> 'Deaf and dumb persons shall be so far considered Idiots in law, as to authorize the Inferior Court to appoint Guardians for such deaf and dumb person, or any person or persons for them: Provided, it shall be made satisfactorily to appear to said Court that such deaf and dumb persons are incapable of managing his or her estate, his or her themselves' (quoted in Crouch, 1986 p. 323).

Despite misinterpreting the Law to some degree[30], the equation with idiots led Flournoy to issue a circular to D/deaf people in the United States and Europe outlining his scheme for a Deaf Commonwealth (Murphy, 1972; Krentz, 2000). His circular was a rallying cry for a Deaf State, a separatist piece of land in western North America that was to be inhabited and ruled solely by D/deaf people for D/deaf people. Flournoy also wrote to people prominent in Deaf affairs asking for their support. His correspondence with William W. Turner[31] was published in the *American Annals for the Deaf and Dumb*, and sparked a lively debate that continued for a three-year period. The debate began with the publication of Turner's (1855) reply to Flournoy's original letter explaining the plans for the Deaf State.

> 'Your plan is beautiful in theory, and if we could transplant all the educated deaf and dumb to a fertile tract of virgin soil, remote from the

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[29] Crouch (1986) has suggested that Flournoy was an eccentric personality with a slippery grip on reality and thus his plans should not be taken seriously. However, whilst Flournoy did appear to have some strange and offensive ideas, some of these, such as his racist belief that 'Negroes' should be forced to return to Africa, were not uncommon in the American South at this time. Furthermore, his proposals were seriously debated and given credence by his contemporary peers, indicating that his notion of a Deaf State was seen as a possibility and not an outlandish plan of a madman.

[30] Crouch (1986) argues that the actual wording of the ruling does not support Flournoy's interpretation, that *all* D/deaf people were considered to be legally idiots and in need of Guardians. This is true; the ruling refers to D/deaf people who in the court's opinion are incapable of managing their own affairs. However, as the legalities rested on the capacity for self-management and it is unclear how such capacity would be ascertained for D/deaf people without English language skills, Flournoy's outrage is somewhat justified as a connection between D/deafness and idiocy was clearly being made.

[31] Principal of the American Asylum for the Deaf.

> influence of corrupt humanity, all that you anticipate might and probably would be realized. That educated deaf-mutes are capable of self-government and of managing the affairs of a State of their own, there can be no doubt. That they would be more favourably situated in such a community for the enjoyment of social intercourse, civil and religious privileges and the means of self-improvement generally, is equally certain. But there are practical difficulties in the development and carrying out of your plan which I fear could not be obviated; difficulties so great that they will dissuade prudent men from embarking in it' (Turner, 1855 p. 118).

Convincing D/deaf people to uproot and bear the costs of this upheaval would in Turner's opinion be difficult, but crucially Turner's main objection concerned children. If the State was to be Deaf only, what Turner asked would happen to the hearing children of D/deaf parents? Turner pointed out, that given the propensity for hearing children, any Deaf State would revert to a hearing one in a few generations. In his reply, Flournoy (1855) reasserted the benefits of his scheme and controversially added

> 'If our children hear, let them go to other States. *This Government is to be sacred to the Deaf alone.* In hearing communities how many children stay with their parents?' (p. 123).

The correspondence between Flournoy and Turner provoked a flurry of responses, Edmund Booth (1858a) for example, agreed with Turner over the infeasibility of the scheme. Undaunted however, Flournoy (1858a) continued to expand on his plans for achieving Deaf independence, suggesting that territory could be acquired from the Cherokees, West of Arkansas. Hearing people would be allowed to reside in the State, but not own property, and the problem of hearing children could be solved if parents bought them land in a nearby State when they reached adulthood[32]. In reply to Booth's and Turner's assertion that the scheme would fail, Flournoy dismissed their criterion of success, arguing that the point was to try and in so doing prove D/deaf people's worth.

[32] Progressively D/deaf women would be granted the vote, which one supportive respondent thought a ridiculous idea (Chamberlayne, 1858). But the Deaf State would, as far as Flournoy's was concerned, be white only.

> 'Even should the contemplated colony fail, as Mr. Booth predicts, one great utility to ourselves will have been derived from a practical experience. We shall have proved to other nations and our own, that deaf and dumb people are capable of many things' (p. 45).

But Booth (1858b) continued to address the issue of hearing children, and suggested instead that the project be scaled down to a Deaf neighbourhood, where D/deaf people living close to other D/deaf people could support each other[33]. Flournoy (1858b) however, refused to back down and continued to outline the merits of his scheme and perhaps to give it an air of respectability acknowledged that Laurent Clerc was the originator of the idea. Other D/deaf people joined in the debate, some arguing in favour (Confer, 1858), some arguing against (Chamberlain, 1858; Carlin, 1858). The editor of the Annals, Samuel Porter, expressed his doubts and again reiterated the suggestion of a smaller proposal for a Deaf neighbourhood.

> 'The most feasible plan of all, in our opinion, would be for two or three or more deaf-mutes, having the money and the capacity for such an undertaking, to select themselves and purchase a few thousand acres of land, and sell it out at a low rate to such deaf-mutes, with their friends, as would become actual settlers...' (American Annals of the Deaf and Dumb, 1858a p. 140).

Still Flournoy (1858c) persisted, suggesting the name 'Gallaudet'[34], and with a rallying cry for Deaf rule wrote

> 'I say to Mr. Booth again, that if the idea of going West embraced nothing more than a settlement under the auspices and supervision of the hearing, we might as well and better, remain in our present positions. I wish to be comprehended. It is a political independence, a STATE SOVEREIGNTY, at which I aim, for the benefit of an unfortunate *down-trodden* class, for they are down-trodden enough, when the human soul is denied its right because of bodily imperfection' (p. 142).

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[33] Krentz (2000) suggests that the hostility between Flournoy and Booth was heightened due to the former's position as a slave owner and the latter's abolitionist beliefs. Given the timing of the exchange (three years before the American Civil War), Krentz's supposition is probably correct.
[34] In honour of Thomas Gallaudet the founder of the first Deaf school in the USA.

Finally, the Annals ended the debate with a summary of the proceedings of the third convention of New England Gallaudet Association of Deaf-Mutes, held in 1858 (American Annals of the Deaf and Dumb, 1858b). Here Laurent Clerc agreed that he had once suggested a Deaf settlement, but refuted Flournoy's assertion that the original idea of a Commonwealth scheme had been his, as he in fact considered the plan unworkable, disliked the exclusionary implications, and pointed out that in the case of sickness or fire, hearing people could be useful. The plan was put to the vote, and was unanimously rejected as members concluded that they would rather live in a mixed society. Given Clerc's standing in American Deaf Community, his opposition to Flournoy's scheme must have influenced many D/deaf people, thus the dream began to waver and with the outbreak of civil war three years later (1861-1865), the possibility of a Deaf State was finally ended.

Early Deaf organisations and publications

Association with other D/deaf children did however lead to the creation of many Deaf organisations and publications around the world. In France for example, the Comité de Sourds-Muets[35] was formed in 1834, and held regular banquets to celebrate the achievements of D/deaf people (Mottez, 1993). In the UK, the first organised meeting was held in Glasgow in 1822, leading to the formation of the Scottish Association for the Deaf and Dumb, Glasgow Branch, followed closely by Edinburgh in 1830 (Jackson, 2001; Smith, 2001). In London, ex-pupils of the Asylum for the Education of the Deaf and Dumb Children of the Poor set up a refuge in 1841 offering education, employment workshops, and welfare to D/deaf people, which eventually evolved into a national organisation, the Royal Association in aid of the Deaf and Dumb. Soon all the major cities and towns had their own organisations, the vast majority developing into Missions for the Deaf (Jackson, 2001)[36]. Following on from school magazines, the Missions also began

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[35] The 'Deaf Mute Committee's' first meeting was a banquet to celebrate the anniversary of Abbé de l'Épée birth; the banquets then became an annual event (Mottez, 1993).

[36] For example, Missions for the Deaf were founded in Liverpool in 1864, Nottingham 1868, and Southampton 1879. Manchester Deaf Club, begun in 1878, was the first to be a social meeting place rather than a church (Jackson, 2001).

publishing their own newsletters, which eventually grew into national magazines, for example, the *Deaf & Dumb Times* (1889) in England, and in Northern Ireland *The Messenger* (1895)[37]. Typically, they contained regional and national news (current affairs, school information and sport) from a Deaf perspective, along with religious and temperance instructions. Two other national organisations were also founded by D/deaf people, the British Deaf and Dumb Association in 1890 and the National Bureau for Promoting the General Welfare of the Deaf in 1911.

Deaf education in the 1800s

Deaf schools also continued to flourish, and by the end of the nineteenth century, there were a considerable number of Deaf schools worldwide. It is difficult to get an accurate number, but Scott (1870) stated that at the last count there were '196 schools in the world, supplied with 449 teachers, and about 7,000 pupils receiving instruction' (p. 110)[38]. Education was thus a reality for an increasing number of D/deaf children. However, despite the accomplishments of former pupils taught through manual communication, the conflict between speech and sign remained (see e.g. Baynton, 1996). Different countries appear to have promoted either one or the other, with France and the USA the most prominent exponents of manual communication. Hearing parents were placed in a difficult position as the superiority of speech instruction was often couched as a pragmatic response aimed at the integration of D/deaf people into society. For example, Scott (1870) Principal of the West of England Institution in the UK wrote

> 'We have seen that signs are the master key for first opening the mind of the pupil; by signs he first gets an introduction to words; by signs and words he gets into the circle of knowledge; but words are foreign to his nature, and he clings with tenacity to signs; signs, however, are incapable of giving him that intimate and accurate knowledge which words convey;

[37] *The Messenger* was originally called *The Silent Messenger*, but after readers objected to this name, was changed in 1899; there was also a junior version called *Our Little Messenger.*

[38] In Austria there were 10 schools; Bavaria 10; Belgium & Holland 10; British Isles 22; Denmark, Norway & Sweden 5; France 44; German States 23; Italy 1; Portugal 1; Prussia 25; Russia & Poland 2; Spain 2; Switzerland 10; the United States 13, Canada 2; and Asia 2 (Scott, 1870 p. 110).

and moreover signs will not give him the means of intercourse with general society' (pp. 203-204).

Moreover, many prominent figures of the time promoted the learning of speech to stem the perceived isolation of D/deaf people. For example, Alexander Graham Bell (1847-1922), having both a deaf mother and deaf wife, involved himself in the issue of communication between D/deaf and hearing people. As a believer in eugenics, the number of D/deaf people marrying other D/deaf people and therefore in his view perpetuating deafness, prompted him to reject both sign and residential Deaf schools, which he felt encouraged D/deaf people to associate together (Bell, 1969)[39]. Thus, whilst the rejection of sign could be seen as practical reasoning it was also premised on a prejudiced fear of difference. The issue finally came to a head in 1880 in Milan at the Second International Congress of Teachers of the Deaf[40].

The Milan resolution of 1880 and subsequent rise of oralism

The Congress in Milan in 1880 is seen as a pivotal date in Deaf history, as it signifies the consolidation of oppression, where instead of recognising sign language and manual communication, educators of D/deaf children decided in favour of articulation. One hundred and sixty four delegates came from around the world to debate the merits of either teaching speech or sign. However, as one participant exclaimed, 'the victory for the cause of pure speech was in great measure gained, as many were heard to say afterwards, before the actual work of the congress began' (Hull, 1880 quoted in Lane, 1984a p. 387). In addition, all but one of the delegates was a hearing person. Thus, oral communication was believed to be superior to sign, as speech represented rational reasoning, whereas sign was merely inferior gesturing. As one delegate exclaimed

> 'Oral speech is the sole power that can rekindle the light God breathed into man when, giving him a soul in a corporeal body, he gave him also a means of understanding, of conceiving, and of expressing himself...The

[39] His premise was in fact false as hereditary deafness is linked to recessive genes, thus the majority of D/deaf parents have hearing children.

[40] The first International Conference of Teachers of the Deaf having been held in Paris two years previously.

> fantastic language of signs magnifies the senses and inflames the passions, whereas speech elevates the mind much more naturally, with calm, prudence and truth and avoids the danger of exaggerating the sentiment expressed and provoking harmful mental impressions' (Tarra, 1880 quoted in Lane, 1984a p. 393-394).

In other words, it was believed that the ability to speak was what elevated humans above animals, speech was associated with the mind whereas sign related to the body, hence D/deaf people needed rescuing from their bestial nature. Furthermore, speech enabled a connection to god, thus the inability to speak endangered the mortal soul. Accordingly, following a majority vote the Congress of Milan passed two resolutions[41].

> '1. The Congress, considering the incontestable superiority of speech over signs for restoring deaf mutes to social life and for giving them greater facility in language, declares that the method of articulation should have preference over that of signs in the instruction and education of the deaf and dumb.
>
> 2. Considering that the simultaneous use of sign and speech has the disadvantage of injuring speech, lip-reading and the precision of ideas, the Congress declares that the pure oral method ought to be preferred'
>
> (Proceedings of Milan Congress 1880 quoted in Gregory, Silo & Callow, 1991 p. 14).

Thus, the ascendancy of oralism began, despite opposition from many D/deaf people, who in 1889 in Paris held their own International Congress of the Deaf, where the opposite resolution supporting sign rather than speech was carried.

> 'The Congress proclaims the infallibility of the method of the abbé de l'Eppé, which, without excluding the use of speech, recognizes manual language as the most suitable instrument for developing the intellect of the deaf' (Proceedings of First International Congress of the Deaf quoted in Lane, 1984a p. 405).

[41] About 160 delegates appear to have voted in favour, and four were known to have dissented (Bender, 1960).

Regardless of this resistance by D/deaf people, oralism spread rapidly. Accordingly, D/deaf teachers were sacked from Deaf schools and replaced with non-signers (Gregory, Slio & Callow, 1991). In the UK, it is difficult to ascertain how many D/deaf teachers and children this affected, but in the USA the rise of oralism was both rapid and widespread, as the percentage of children taught orally rose from only seven and a half percent in 1882 to almost 80 percent by 1919 (Van Cleve & Crouch, 1989), and the number of D/deaf teachers was reduced from around 40 percent in the 1860s to less than 15 percent by 1920 (Gallaudet University, 2001). In some ways, the ascendancy of oralism reflected the complexity of the issue. Sign languages were seen as gestures and not truly accepted as languages in their own right until Stokoe (1960) highlighted the grammatical structure of American Sign Language (ASL). In addition, children with minor hearing loss or postlingual deafness were capable of learning and understanding speech and could be promoted as success stories. Furthermore, as many Deaf schools had formerly been asylums, the educational standards within them were poor. Thus, oral methods were intended to raise these standards and end discrimination (Gregory, Silo & Callow, 1991).

Contemporary Deaf education in the UK

Unfortunately, and sadly for D/deaf children, oralism was often brutal. Contemporary accounts of school days have revealed that corporal punishment was widespread and meted out to any child caught signing (see e.g. Taylor & Bishop, 1991; BDA, 1993; McDonnell & Saunders, 1993)[42]. There was considerable resentment over this ban on sign language despite the restriction being ignored in free time.

> 'We'd get together in the playground, stand in a circle or an oval, so the teachers couldn't see in, and sign away to each other' ('Harry' in Ladd, 1998 p. 121)

Nevertheless, many former pupils also placed considerable value on the shared experience and community space that residential schools fostered (e.g. Craddock,

[42] Although the caning of children was an accepted part of school discipline in most schools prior to the 1970s, caning D/deaf children for communicating in sign was oppressive.

1991; Monery & Janes, 1991). There has been some dissent, highlighting the problems of isolation, the confusion of being sent away from home, and the exclusionary aspects of Deaf separatism (e.g. Ballin, 1931; Bertling, 1994), but, in general, Deaf schools have been prized and are seen as important spaces in which to develop a Deaf identity (Ladd & John, 1991). Even so, the schools have also been the main sites of oralism, which has had a profoundly detrimental affect on the development of Deaf Culture and left many D/deaf people unable to communicate with anyone in either sign or speech.

> 'When I left school I met adult signers and I could not understand them. I had poor speech so hearing people could not understand me. I was neither hearing nor Deaf' (McDonnell & Saunders, 1993 p. 258).

Moreover, research in both England and the USA highlighted the poor educational attainments of Deaf school leavers (Babbidge, 1965; DES, 1968; Conrad, 1977; Trybus & Karchmer, 1977). In the face of this evidence, pure oralism began to wane in the UK in the late 1970s in favour of a new approach known as Total Communication (TC), which combined speaking with signing (Evans, 1982). By 1980, in Scotland and England 58% of primary schools or units were oral and 40% were TC, and in secondary schools 65% were oral & 35% TC (Jordan, 1986). As Baker & Knight (1998) point out, for many teachers and parents there was some relief over no longer having to make a choice between manual and oral teaching methods. Nonetheless, as it is mainly hearing parents, who have to make difficult decisions for their D/deaf children (see e.g. Robinson, 1991, Fletcher, 1987,1991) so conflict along D/deaf/hearing lines has arisen. Ladd (1991) believes oral teaching methods to be a rejection of a positive Deaf identity and therefore detrimental to the psychological development of D/deaf children. However, Gregory, Bishop & Sheldon (1995) and Beazley & Moore (1995) both found that D/deaf children themselves have conflicting views over hearing and Deaf identifications, for these children as for all children fitting in was a paramount concern.

Further changes to Deaf schooling occurred following the 1981 Education Act[43], which stipulated that local authorities should educate 'special needs' children in mainstream schools wherever possible. The subsequent integration policies led to the closure of a number of Deaf residential schools. The National Union of the Deaf (undated circa 1978 quoted in Gregory, Silo & Callow, 1991) strongly objected on the grounds of genocide and the discriminatory perpetuation of oralism (see also Lane, 1984b). But despite these protests, the majority of D/deaf children are currently educated in special units attached to mainstream schools. In 1998 in England, there were 28 schools for the Deaf, and 394 units (private email from BATOD[44] 7/2/2002). The use of TC has continued to be popular (see e.g. Baker & Knight, 1998). Table 3.5 shows the results of a 1996 survey of all schools and units for D/deaf children in the UK.

Table 3.5: Percentage of Deaf Schools and Units Communication Policies in 1996, UK

	Total communication	Oral	Bilingual	Declined to specify
Schools (total 31)	48	23	13	16
Units (total 468)	22	28	3	48

Source: derived from Baker & Knight (1998) p.81.

As the table indicates there has recently been a move to bilingual education, which includes both BSL and written English (see e.g. Gregory, 1996), although Deaf schools appear to be more willing to use signing than units[45]. In addition, as the EUD (1997) report commented, 'oralism may be on the wane but sign language has yet to fill the vacuum' (p. 7). Even so, bilingualism in schools is growing and is seen as a positive step by D/deaf people, similarly the campaign for sign language recognition is gaining support. Moreover, the use of interpreters to support D/deaf children, in both schools and units, *may* increase

[43] Implemented in 1983.
[44] British Association for Teachers of the Deaf.
[45] Although the poor response of units makes this difficult to determine.

following the provision of auxiliary aids under the Special Educational Needs and Disability Act (2001) coming into force in September 2003[46].

Contemporary Deaf organisations and publications in the UK

Meanwhile D/deaf adults continue to meet and organise, and many of the original Deaf Missions and societies throughout the UK are still in existence. There have been some changes as the religious focus has reduced and some have altered their names to more catchy titles, such as Deafway in Preston and Deaf Connections in Glasgow (see e.g. Smith, 2001), or simply Deaf Centres (e.g. Manchester & Bristol). Similarly, the three national organisations remain active but have changed their names. The Royal Association in aid of Deaf People (RAD) and the British Deaf Association (BDA) both having dropped the word dumb[47], are Deaf focused and continue to campaign for sign language recognition whilst also providing advice and welfare services for D/deaf people; the BDA is run solely by Deaf people. The National Bureau for Promoting the General Welfare of the Deaf, now called the Royal National Institute for the Deaf (RNID)[48], having become the largest organisation for D/deaf people, also provides various services. But it is often considered deaf rather than Deaf as it is mainly run by hearing people and appears to focus on technological 'cures' for deafness, which is reflected somewhat in its magazine *One in Seven*[49], as it contains a lot of information about equipment and assistive technology (see e.g.

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[46] The Special Educational Needs & Disability Act (SENDA) (2001) amends the original Disability Discrimination Act (1995) by removing the exemption of education. The Act applies to England, Scotland and Wales, but not Northern Ireland. Following a staggered implementation from September 2002, the third part, which covers the provision of auxiliary aids such as induction loops or interpreters for D/deaf students, came into force in September 2003. However, provision is left to discretion as aids need only be provided if they are considered 'reasonable' adjustments, as such it is difficult to assess the likely outcomes of the Act.

[47] The RAD in 1986 and BDA in 1971.

[48] The National Bureau for Promoting the General Welfare of the Deaf changed its name to the National Institute for the Deaf in 1924, and the Royal part was then added in 1961 after the Duke of Edinburgh became a patron.

[49] The RNID's first magazine begun in 1946 was at first called *The Silent World*, this was then changed several times, to *Sound Barrier*, then *See Hear* and now *One in Seven*, which refers to the estimated prevalence of deafness in the UK population. In a recent survey, the RNID found that only 2% of its readers use BSL as their main method of communication. The contention that the RNID is deaf rather than Deaf therefore appears to me to be borne out to some extent (RNID publicity sheet February 2003).

Alker, 2000). The main Deaf magazine *British Deaf News*[50], which the BDA sponsors, continues the tradition of early newsletters and includes news from a Deaf perspective, Deaf sports, as well as listings of signed TV programmes, plays and films. The Federation of Deaf People (FDP), founded by D/deaf people in 1998, to campaign for the recognition of BSL as 'a bona fide language, native to this land' (see website footnote 21) produces its own radical magazine *Voice*, which publicises campaigns for sign language and bilingual education. There is also a new independent magazine, *Handwave* launched in 2002, which focuses on leisure activities.

Denied the legitimacy of 'normality', Deaf spaces are an important component of D/deafness. A further Deaf space, the corporeal body involves the incorporation of various assistive devices. Again, the contestation of D/deafness in favour of hearingness and speech is an important component in these material and embodied relations.

Deaf technology

A wide range of technologies can be used in conjunction with D/deafness, most of which hearing people can also use. These include visual versions of mundane aural equipment that are typically found and used in everyday settings, such as flashing or vibrating alerts, for smoke warnings and indicators that someone is at the door. Also, technologies that have been specifically designed as visual versions of telecommunication systems to enable D/deaf people to access them, for example textphones. Other technologies designed to amplify sound, are used solely by D/deaf people, namely hearing aids and cochlear implants.

[50] The *Deaf and Dumb Times* begun in 1889, changed its name to the *Deaf Chronicle* (1891), then to the *British Deaf Mute*, and in 1896 to *British Deaf Monthly*, then again in 1903 to the *British Deaf Times* until 1954 when it amalgamated with *Deaf News* (which began as the *Bolton, Bury, Rochdale and District Deaf and Dumb Society Quarterly* and also experienced numerous name changes) to finally become *British Deaf News* in 1954 under the sponsorship of the BDA (see Van Cleve, 1987). In October 2003, the name will be changed again to SIGNMatters.

Flashing or vibrating alerts

D/deaf people use flashing lights or vibrating pagers instead of sound alerts. In some, public places flashing lights are provided in conjunction with sirens for fire alarms. But these are quite rare and are mostly in places specifically designed for D/deaf people, such as Deaf Centres. Similarly, some workplaces provide their D/deaf employees with paging fire alerts, but again this is not particularly common. Mostly D/deaf people use flashing or vibrating alerts in their home space. The smoke alarm, baby crying monitor, phone calling, or door waiting are usually connected to lights in the living room, and/or bedroom, with different speeds of flashing indicating which alert is operating; whilst alarm clocks for waking up are typically set to vibrate under a pillow (see e.g. Connevans website[51]). There are new complex pagers that combine all the alerts into one system, which can then be worn on a belt and set to use both lights and vibration, but these are very expensive. Some Social Services Departments help towards the cost of this equipment, but increasingly D/deaf people are expected to bear the extra costs themselves.

Textphones

Textphones were invented by Weitbrecht, a D/deaf man, in 1964 when he attached an acoustic coupler to a typewriter, enabling text to be carried by existing phone lines (Lang, 1995). Against the odds, two other D/deaf men, Saks and Marsters, helped develop and market them, resulting in the availability of the first portable versions in the 1970s (ibid.). In the UK, they are typically known as minicoms. The modern versions can combine a textphone with an aural phone and looks like a slightly larger conventional desk phone, with added flashing alert indicator, small screen and keyboard (see Connevans website[52]). There are a few conventions for use, for example, turn taking is indicated with the letters GA – meaning GO AHEAD and the final goodbye is followed by SK – meaning STOP KEYING. As textphones can only be used in conjunction with other textphones, when contacting an aural phone D/deaf people use a relay service. In

[51] Connevans website http://www.connevans.com
[52] See footnote 51.

the UK, TypeTalk, begun in 1989 and run by the RNID is situated in Liverpool[53]. Conversations are three-way. The D/deaf person textphones the operator, who orally relays the text to the hearing person contacted, and then relays the response again back into text for the D/deaf person. It is a time consuming process and often breaks down when encountering the ever popular computerised responses. Increasingly D/deaf people are also using mobile phones to send text messages. To distinguish these from landline textphones, in Deaf Community they are known by their acronym SMS (short messaging services). Another recent development, and at present expensive to buy, is the videophone. These are again similar to conventional desk phones, but have a small camera and video screen attached to them, which D/deaf people can use to sign to each other.

Hearing aids

The history of hearing aids can be divided into five eras (Berger, 1984; Dillon, 2001). Beginning with the acoustic era in the 1600s, ear trumpets made of e.g. horn were made to amplify sound entering into the ear. They worked to some degree but only within a very narrow frequency range (see Berger, 1984; Kenneth Berger Museum site[54]). Figure 3.5, on the next page, shows a typical ear trumpet from the 1850s.

[53] TypeTalk is jointly funded by British Telecom and the RNID. Phone numbers can now be directly dialled following the prefix 18001, and a 60% rebate is automatically credited to the text part of the phone call. A new service TextDirect that allows the relay of text from mobiles is currently being developed. At present this services only allows outgoing not incoming text messages to be sent to landline textphones.

[54] http://dept.kent.edu/hearingaidmusuem/index.html (22/2/03).

Figure 3.5: The London Dome Hearing Trumpet (1850s)

Source: Oticon Eriksholm Museum (Sound & Fury site[55])

The acoustic era was followed by the carbon era after the invention of the carbon microphone hearing aid in 1899 by Hutchinson[56]. At first, these devices were not that powerful, but eventually by the 1930s, they had become more sophisticated, as shown in Figure 3.6, although the batteries in particular were very heavy.

Figure 3.6: Carbon Microphone Aid (1930)

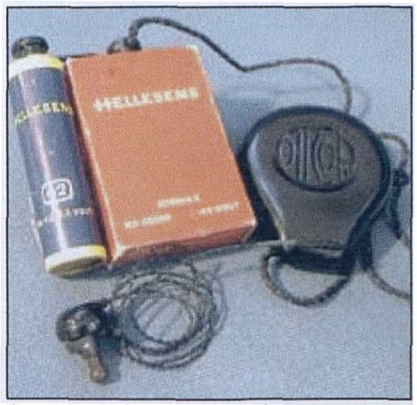
Source: Oticon Eriksholm Museum (see footnote 56)

Third was the vacuum era after the vacuum tube was invented and applied to hearing aids by Hanson in 1920 and finally became wearable in 1934 through Amplivox (Berger, 1984). The components of the aids were gradually getting

[55] http://www.pbs.org/wnet/soundandfury/cochlear/hearingaids.html (19/2/03)
[56] First called the Akoulallion, but redesigned and changed to the Acousticon in 1902 (Berger, 1984).

smaller as can be seen in Figure 3.7, but the batteries were still so big that they had to be worn on a belt or round the neck.

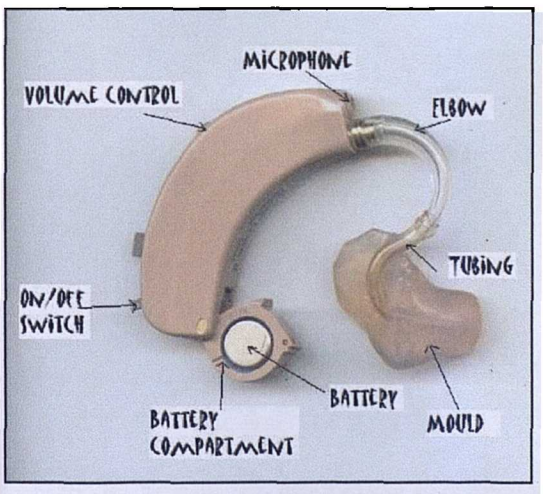
Figure 3.7: Vacuum Tube Hearing Aid



Source: Oticon Eriksholm Museum (see footnote 56)

By the fourth transistor era, in the 1950s, the size of batteries had decreased enough for the hearing aids to be head mounted and a number of models were developed (ibid.). These devices were expensive but, in the UK, were available free of charge through the NHS. Eventually batteries became small enough to fit inside the hearing aids and so the modern behind the ear (BTE) and in the ear (ITE) hearing aids were developed, a typical BTE is shown in Figure 3.8.

Figure 3.8: Behind the Ear Modern Hearing Aid (1990)



Source: http://www.deafok.com (27/2/03)

Finally, the digital era began, when the first fully digital hearing aids became commercially available in 1996. They share the same design as transistor models, but they are a bit smaller and they achieve better sound quality as they can be matched to an individual's hearing profile across various frequencies making them highly sensitive. In the UK, they have recently also become available on the NHS on a limited basis[57]. From estimates based on the General Household Survey of 1998, about three percent of the population aged over 16 in England & Wales wear hearing aids (ONS, 2000). However, as the DPIC[58] study found (Dye, Kyle, Allsop, Dnemark, Dury & Ladd, 2000) the majority of D/deaf people choose *not* to wear hearing aids (54% never wore them, 38% used them every day, 5% once a month and 3% rarely p. 45).

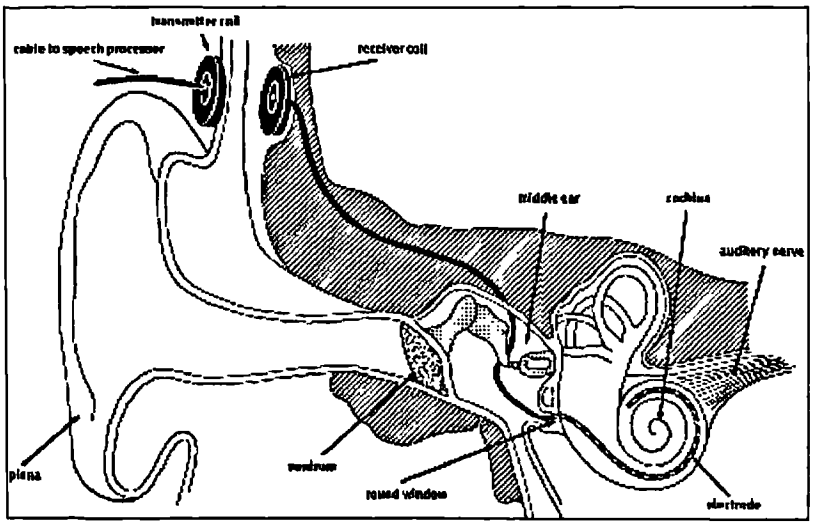
Cochlear implants

Beginning with a global race between three different inventors: House in the USA, who began implanting single channel devices in 1961; Chounard in France who implanted a multi channel device in 1976; and Clark in Australia who implanted his first human volunteer in 1978, cochlear implants finally became commercially available in 1985 (see e.g. Gray, 1985; Blume, 1999; Niparko & Wilson, 2000). In a cochlear implant (CIs), electrodes are passed through a small hole drilled into a person's skull and implanted into the cochlea, situated in the inner ear, as can be seen in Figure 3.9 on the next page.

[57] Digital hearing aids could be obtained through the NHS in a number of trial audiology departments from April 2000. From April 2003 this provision will be extended to one third of all audiology departments across the UK (BBC News 7th February 2002 from website http://www.bbc.co.uk/1/hi/health/2734401.stm (26/2/03).

[58] DPIC - *Deaf People in the Community* survey was carried out by the Centre for Deaf Studies at Bristol University, with a quota sample representative of census statistics of 236 members of Deaf Community, aged 18-75 in England and Wales between 1997-2000. All were interviewed by D/deaf researchers six times over two years. DPIC provides the most comprehensive and up-to-date picture of British Deaf Community's use of technology (Dye, Kyle, Allsop, Denmark, Dury & Ladd, 2000).

Figure 3.9: The Interior of the Ear and Position of Cochlear Implant



Source: RNID (1999)

The other end of the electrodes are then connected to a receiver and placed under the skin behind the ear. Once healed, about four weeks later, the receiver is then attached magnetically to the transmitter on the outside of the head, which in turn is connected to both the microphone and the processor worn over the ear like a conventional hearing aid. Sound waves are converted into a code passed to the transmitter, which in turn sends the signal across the skin to the receiver via radio transmission. The receiver decodes the electrical pulses, which then travel along the electrodes directly to the cochlea, thus stimulating the auditory connection to the brain and enabling the wearer to 'hear' the sounds (see e.g. Tucker 1998; RNID 1999). In the UK by 2001, nearly 1,800 adults and 1,700 children (aged 17 and under) had a CI (Institute of Hearing Research website[59]). However, CIs are controversial, particularly for D/deaf children. Deaf Communities around the world, mainly view them as hearing impositions that link D/deafness to pathology and due to their strong connection to the advancement of oralism are also seen as continuing the oppression against sign language use (Lane, 1984b; Lane, Hoffmeister & Bahan, 1996).

[59] http://www.ihr.mrc.ac.uk (28/2/03).

The incorporation of these technologies into the practices of Deaf Community and embodiment are examined in more detail in chapters five and six through a qualitative exploration grounded in the perceptions of D/deaf people themselves.

Summary

At the beginning of this chapter, deafness as a medical condition based on a pathological model that classifies D/deaf people in comparison to a normal standard of hearing was described. These definitions situate D/deaf people as deficient and ultimately are aimed at assimilation and the acquisition of spoken language. Whilst medicalisation of hearing differences can play a major part in the experience of being deaf, especially for deaf children, this construction of deafness as a disability can also be rejected. Deafness can instead be embraced as a positive identity based on a shared community and the use of signed communication. Rather than being disabled, D/deaf people can thus be considered a linguistic minority, leading to a divergence of concerns around the notions of inclusion and exclusion. Whereas the disability movement has stressed the need for sameness, particularly in relation to mainstream education for disabled children, Deaf Communities have campaigned against the closure of separate Deaf schools. This configuration of Deafness however, maintains the binaries between deafness and hearing, and also abnormality and normality, which ultimately may be problematic. A multiple or rhizome view of disability would allow for diversity of experience that could incorporate D/deaf concerns over the acceptance of sign language and the incorporation of different sensibilities that do not privilege standard perceptions of the world. In this way, the nature and culture interactions that become explicit when deafness is lived as Deafness, can challenge the false connection between disability and inferior abnormality.

Having introduced the notion of cultural Deafness the chapter then explained in greater detail the experience of being D/deaf, including the cultural connections that are fostered by a shared commitment to positive notions of deafness and the presence of diversity within the notion of 'the' Deaf Community, which

highlighted not only the plurality of identity but also the incorporation of hearingness within D/deafness. Stressing the importance of sign language for D/deaf people the main elements of BSL were then described, especially its belated recognition as an official language in the UK, and its inherent geographical nature through the use of both space and movement. Continuing this focus on D/deafness, the continual discrimination against sign language and consequent oppression of D/deaf people was highlighted through the history of Deaf spaces, especially the development of education and the founding of schools for D/deaf children, which play a central role in both the subjugation of oralism and the enduring resistance of D/deaf people. A further example of the importance of Deaf space was briefly explored with the notion of a Deaf homeland. In addition, to provide a pathway to better understanding of present Deaf Communities, the chapter included the history and current picture of Deaf organisations and publications.

Finally, in this chapter the diversity of technological elements that intersect and interact to comprise the performance of D/deafness were introduced, namely visual or somatic signals, textphones, hearing aids and cochlear implants. The next chapter describes the methodology used to examine the lived practices of being D/deaf and the network of relations with machines.

Chapter Four: Researching With D/deaf People

This chapter is concerned with the methodologies used in this study. Beginning with a summary of the issues surrounding disability research and the applications of the social model principle, it then moves onto and explores the particularities of researching with D/deaf people. This includes the importance of cultural differences, the use of sign language, the implications that the multiple presence of D/deafness (in both the participants and the researcher) has for standard interviewing practices, and to the importance of positionality. Having described my own relationship to D/deafness the chapter then considers the ethical dilemmas I encountered in regards to this location. In addition, general ethical issues relating to any research conducted with D/deaf people and research carried out through the Internet are also highlighted. The chapter then provides a description of the fieldwork in the preliminary stages of negotiating access, the subsequent methodologies used, and the secondary stages of collecting and analysing the data. A brief description of all the participants is also included in this section (a more detailed profile is provided in chapter five). This is followed by a consideration of the issues involved when employing a BSL translator. Finally, the whole study and the various methodologies used are reflected upon.

Disability research

In the past, disability research has been heavily criticised by disabled people for a number of different reasons, not only because of the patronising omission of disabled people's own views (e.g. Hunt, 1981; Rioux & Bach, 1994), but also because of the paradigm upon which a lot of research has been based (Barnes & Mercer, 1997). Specifically research emphasising cure or rehabilitation based on a corporeal notion of a 'normal standard' has been rejected by many disabled activists in favour of research that follows the social model (e.g. Barnes, Mercer & Shakespeare, 1999). To ensure that disability research incorporates the epistemology of societal disablement, Oliver (1997) has suggested the inclusion of six principles:

1) A description of the experience of disabled people.

2) A redefinition of the problem of disability.

3) A challenge to dominant ideological and methodological paradigms.

4) The development of a methodology consistent with emancipatory research.

5) A description of the collective experience of the disability movement.

6) An evaluation of services established by disabled people themselves.

Whilst this thesis engages with five of these, the sixth one (number four in Oliver's list) is more problematic. For Oliver, emancipatory research is work that has been initiated or directed by disabled people, and not counting myself, this is not the case in this thesis. This issue has been debated within disability studies (e.g. Morris, 1992; Zarb, 1992; Bury 1996; Barnes & Mercer, 1997) and can be difficult to reconcile within existing research structures (Oliver, 1992). For Shakespeare (1996b, 1997b) research needs to be both accessible and participatory, but the academic process should also be able to direct itself (i.e. not necessarily be emancipatory) as long as the research is within the remit of the social model. In agreement with this view therefore, whilst I am committed to the main principles of the social model this study is self-directed.

Another area of contention in disability research is whether disabled researchers should always be used to research disabled people (e.g. Oliver & Barnes, 1997). In my view, whilst it is vital that disabled people should be present in the research process, as the representation of disabled people in academia is low,[60] non-disabled researchers perform an important role in the continuation of disability research. Moreover, the insider/outsider positions are not always straightforward as people can have multiple identities (Vernon, 1997; Valentine, 2002). Nevertheless, it is true that negotiating access, understanding different terminology, sharing oppressive experiences etc. all help, especially when the research is qualitative. This links to a further area of debate surrounding the issue of objectivity and the independent researcher, for Barnes (1996) such independence is a myth, indeed as far as he is concerned

[60] From figures supplied by HESA (http://www.hesa.ac.uk), in 2001/02 where disability status had been declared, 5.4% of undergraduates, 3.0% of postgraduates, and 1.4% of staff in higher education were disabled. The total percentage of disabled people in the UK is difficult to ascertain, however for the Year of the Disabled in 2003, the percentage of the UK population that would self declare themselves as disabled was estimated to be 15% (http://www.csreurope.org 8/10/03).

> 'There is no independent haven or middle ground when researching oppression: Academics and researchers can only be with the oppressors or with the oppressed' (p. 110).

Similarly, Oliver & Barton (2000) have written that

> 'It is an inescapable fact that the relationship between disability studies and disabled people is essentially a parasitic one and there are real concerns about abuse, exploitation and colonisation' (p. 8).

These are extreme views that nevertheless express the disquiet that many disabled people feel when faced with the notion of objectivity. Disability as argued in the previous chapter is an emotional experience that can't be detached from political and embodied engagement. Feminists have raised the same concerns in relation to geographical research (e.g. Roberts, 1981; Monk & Hanson, 1982; Nast, 1994). Qualitative research that aims to understand different perceptions and experiences can't be conducted without establishing some sort of rapport and thus subjective exchange. But such research is not simply about discovering and respecting difference for as McDowell (1992) argues,

> 'Feminists, however, are not interested in merely respecting the differences between women in the way which characterizes postmodern discourses but in overturning and restructuring the relations of power that currently structure the differences. In this sense, we have not rejected the progressive 'science project' but rather we are searching to replace the 'one true story' with a permanent partiality' (p. 69).

As such, feminist research encourages self-examination and reflexive enquiry at all stages of the research process.

> 'Taking on feminist research entails close scrutiny and (re)politicitization of all aspects of the research process – from choosing a research topic to selecting data collection methods, from setting a research question to conceptualising theoretical constructs, and from designing a research project to presenting and circulating analyses' (Moss, 2002 p. 3).

In disability research, this translates into a commitment towards challenging disablist barriers and the bounded notion of 'the body' as well as ensuring that disabled people's own concerns are integral to the project. Disabled people have indicated that they wish to be involved in both research and discourse that is

empowering and actively challenges ableism (Kitchin, 2000, 2001). Respecting these wishes therefore, disability research needs to be politically committed. As Kobayashi (1994) stated in relation to researching "race", 'I do not use other people's struggles as the basis for my research; I use my research as a basis for struggles of which I am part' (p. 78). Personally being D/deaf I am not and will never be a neutral observer of D/deaf interactions. I am passionately and intimately involved in the construction of disability and refute the connection to abnormality precisely because my body, my D/deaf body, is normal to me. I believe like Routledge's (1996) 'third space as critical engagement' that academia and activism can coincide and heighten the aliveness of theory.

> 'The third space becomes a fluid site of continual repositioning, of permanent oscillation and fluidity within and between enunciatory sites, physical locations, political positionings, effecting a web of interconnected conditions of possibility. Emotions, memories, life histories, bodily experiences emerge from this space and breathe life into our words' (p. 412).

Overall, Moore, Beazley & Maelzer (1998) capture the spirit of what I believe all disability research, including research with D/deaf people, should be based on.

> 'For us, it should not be embedded in, or regulated by, medical model ideologies; it should not attempt to be neutral or to disregard the impact of oppression on disabled people's lives; it should not reproduce the familiar, and so leave disabling personal, political or practical barriers unchallenged; it should not exclude disabled people from its process or productions; it should not be controlled entirely by non-disabled people and it should not be reluctant to venture into unmapped theoretical and methodological territory' (p. 14).

Research with D/deaf people

As I have already highlighted in the previous chapter, D/deafness is not considered a disability by D/deaf people due to the disputed connection with corporeal abnormality. In addition, whilst D/deaf people share some of the concerns of the disability movement, such as discrimination of access, there are also large areas of disagreement. In relation to research, all of the issues explored

in the above section are pertinent to research involving D/deafness. A commitment to the social model and the principles suggested by Oliver (1997), are important, at the same time objectivity is very difficult in the context of Deaf Community and the background of oral oppression. But there are also some significant differences when researching with D/deaf people, specifically, different cultural practices, use of sign language, and disparate perceptual abilities that serve to challenge the hearing basis of traditional interviewing techniques. All of which require a reflexive exploration of the researchers' position.

Deaf Cultural practices

Firstly, due to past discrimination and the lack of D/deaf representation in mainstream discourse there is a strong political drive towards exploring the richness of Deaf Culture. Research that reveals the everyday lives of D/deaf people and the practices of Deaf Community are therefore welcomed as important components towards the preservation of Deaf history and the continuation of Deaf space. Notwithstanding this ethos, there are reservations about whether hearing people without any knowledge of D/deafness are truly able to understand the differences in culture. For example, Jones & Pullen (1992) (Jones being hearing and Pullen being D/deaf) each described the disparities in culture norms and understanding encountered by Jones in their research.

> 'Lesley tried to 'copy' our culture and always wanted to know what was right or wrong, but she will never 'fit' into the culture exactly – she might know the rules, but not the right way of using them. For example – touch - I found it hard to explain exactly how Deaf people use tapping someone on the shoulder. So sometimes Lesley would tap me on the shoulder I would think it was urgent when it wasn't. It was just her way of tapping someone. It used to make me very frustrated – when someone tapping me normally wouldn't have this effect on me – but its impossible to explain exactly the cultural norms of Deaf people' (Pullen in Jones & Pullen, 1992 p. 192).

> 'I realised working with the Deaf community was very different. One of the things I noticed straight away was time. Time and punctuality seemed to have a very different meaning. Setting up interviews, one after another, at people's houses was hopeless. We would be there for hours at the first house. Leaving a Deaf club meant at least an hour of waiting for goodbyes to be made...The timing of research was different too. I was used to arriving at people's houses and starting to interview straight away after a *short* chat then having a cup of tea and relaxing. The opposite seemed to be true of interviewing Deaf people at home. Time needs to be taken for everyone to get to know one another first and then the interview takes place at the end' (Jones in Jones & Pullen, 1992 p. 193).

Getting to know and understand a different culture is the basis for all ethnographic research and so Deaf Cultural norms and expectations can be discovered through participation. Similarly, sign language can be learnt. However, attentiveness to visual and tactile perceptions instead of aural awareness can be difficult to get to grips with. D/deaf people are through necessity attuned to visual information and noise whether present or not is mainly superfluous. In sign language classes, for example to get everyone signing, and so D/deaf tutors are not disadvantaged, voices are not usually allowed. This can feel strange at first.

> 'There is also something a little disarming about being in a totally silent environment – when it all got too much for me I would retire early and sing in the bath' (Harris, 1995 p. 298).

Conversely, Deaf Clubs and gatherings of D/deaf people are often very noisy, but the sounds need to be placed in the background, which can be hard to do at first (e.g. Thoutenhoofd, 1998). As well as negotiating these cultural differences, researching with D/deaf people also involves getting used to a new language, and sign is not just a different language from English it also incorporates an alternative mode of expression.

Using sign language

All languages incorporate body language, but sign languages are uniquely based on body movements (e.g. Kyle & Woll, 1985). Learning to sign therefore is

somewhat similar to learning to dance. Emotions are conveyed by the facial expressions and the intensity of making the signs. Corporeal spatial arrangements are also crucial, for example in BSL (and ASL), disliking or not wanting is signed as a push away from the body, whereas liking and wanting is signed on the body. Similarly, each person's body is used as a reference point for space, with the future ahead of the signer, the past behind, and the present 'co-located' with them (Taub, 2001). Learning to sign therefore is not simply a matter of knowing the different signs for each English word it is also about changing the comportment of your body. Again, this occurs with spoken languages, but with sign it is fundamental to meaning, whereas with oral it largely adds to meaning. Hearing people, as hearing interpreters testify, can be fluent in sign, but it does take time to shift to the new spatiality. Misunderstandings therefore can occur for a variety of reasons, such as misinterpretation of the actual signs, lacking awareness of the cultural expression behind the signs, not catching the body emphasis conjoined as the sign etc. Harris (1995) provided a good example of this when describing her encounter at a Deaf conference.

> 'On the final day of the Conference I was having breakfast and was in the queue as it was a 'help yourself' affair. Bert (of the anti-hearing fame) was next to me. I offered him some mushrooms. He looked disdainfully at me.
>
> NO NO BAKED BEANS WANT ME. BAKED BEANS GOOD FOOD BAKED BEANS – DEAF CULTURE!
>
> Baked beans are part of Deaf culture are they? What does that mean? Is he saying they are a good cheap food – working class food or what? Curiouser and curiouser.' (p. 307)

This begs the question if she didn't understand what he meant why didn't she ask him? It also highlights the sort of confusion that can arise when trying to understand differences.

Hearing basis of interviewing

Researching with D/deaf people can also be challenging due to lack of fit with existing research methods. Qualitative methods, especially interviewing, in

general privilege oral communication. For example, in Rubin & Rubin's (1995)[61] introduction to qualitative interviewing, chapter one is called 'listening, hearing and sharing', chapter 8 'hearing about culture', and chapter 10 'what did you hear?' They also make several statements that equate interviewing with being able to hear

> 'To conduct a qualitative interview and truly *hear* what people say requires skills beyond those of ordinary conversation and takes considerable practice' (p. 2 my emphasis)
>
> 'Although qualitative interviews are similar in key ways to ordinary conversations, they differ in the intensity of *listening* to the content of what is being said. The qualitative interviewer *listens* intently to pick up on key words and ideas and to mark important omissions' (p. 7 my emphasis).
>
> 'In qualitative interviews you *listen* so as to *hear* the meaning of what is being said. You develop skills to *listen* carefully, sentence by sentence, and word by word. Qualitative interviewing requires *listening* carefully enough to *hear* the meanings, interpretations, and understandings that give shape to the worlds of the interviewees' (ibid. my emphasis).

There is a problem here, being oral deaf and using two hearing aids. When I am listening it is always intently but there is no guarantee of my understanding and fostering rapport. Whether I gain an insight into interpretations and I am able to mark omissions is a chancy thing. How loud, how clearly, how concisely will the interviewee talk, will they mumble, will they have a low pitch or high pitch voice, will they tail off at the end of sentences? As an illustration, I once conducted an unsupported[62] qualitative interview for my undergraduate dissertation, where even though I had explained that I wore hearing aids, the site turned out to be noisy, and the interviewee was a very busy doctor who seemed

[61] Whilst Rubin & Rubin's (1995) emphasis on the hearing requirements of qualitative research makes me feel left out, I do not wish to single out this work as lacking, as all textbooks on qualitative methods carry the same notions of listening and hearing requirements and this book is an excellent introduction to the art of interviewing.

[62] By unsupported I mean that I had no communication support, such as a human note-taker or a mechanical radio aid.

unable to grasp the concept of talking louder. Instead of abandoning the interview, I asked my questions but was unable to hear the answers. It was a perfect example of a totally objective interview, and it was a disaster. I felt stupid and the interviewee got exceedingly angry. I suppose I came across as rude, I don't know, but I quickly abandoned my methodology plans, scrapped interviewing, and revised the whole project. In this thesis my original plan was to again avoid interviewing and use video diaries, but the more I thought about it the more I realised that if I wanted to gain insights into how D/deaf people felt about technology the best way would be to ask them. The participants of the study were a mixture of D/deaf signers and oral D/deaf people so their competency and mode of communication varied enormously (see e.g. Gregory & Miles, 1991; Taylor & Meherali, 1991). But they all shared a different relationship to hearing and listening than the one assumed in 'standard', namely audist, interviewing. In the end therefore a hotchpotch of communication modes were used, which rather than being seen as limitations should be celebrated as endeavours to establish meaning. Mainstream representations of D/deafness are dominated by hearing people that often fail to include the experiences and views of D/deaf people themselves. Research with D/deaf people is thus an important step towards their inclusion, which can not only challenge the way D/deaf people are viewed, but also disrupt the notion of disability and the construction of normality. Concentrating on D/deaf spaces and the interaction of technology with these spaces facilitates our understanding of all bodies.

Positionality

Due to the differences in language, perceptual modes, and the strong affiliation to community, researching with D/deaf people can be cross-cultural and thus positionality will be an important consideration (e.g. Rose, 1997; Skelton, 2001; Valentine, 2002). Maybe not always the first questions asked, but certainly present in the initial part of meeting someone, D/deaf people will sign 'YOU DEAF?' and if the answer is yes, then 'BORN DEAF?' Are you D/deaf or are you hearing, and if you are D/deaf were you born deaf are crucial questions, as the answers will position you (Brueggemann, 1998, 1999). I was born hard of hearing but gradually became severely deaf as I grew up. I went to a mainstream

hearing school, I wear two hearing aids, enabling me to hear voices in conjunction with lip-reading, and mainly use English to communicate. As such, I am oral deaf. I taught myself to fingerspell when I was young, but I didn't use it much. I finally decided to go to sign language classes when I was in my twenties, learning Stage One BSL[63]. For this thesis however, I wanted and needed to be more fluent in sign and so I attended some more sign language classes (see preliminary stage of fieldwork below). These classes allowed me to become more conversant with Deaf Culture and although I am still not totally fluent, I do now understand BSL. And I love knowing it. It feels comfortable and familiar to use visual expression. My D/deaf eyes do not get tired when faced with an increased attention to ocular information. Indeed, it's easier than trying to listen. Learning sign has enabled me to understand more about my Deafness and has also furthered the establishment of trust and shared understanding. At the same time, I have continued to watch Deaf TV programmes, read BDN as well as D/deaf chatgroups on the Internet, and occasionally attend Deaf Clubs. My answer therefore, to the questions 'YOU DEAF?' is 'YES DEAF ME', and to 'BORN DEAF?' is 'NO, BORN HALF DEAF, GREW UP DEAFENED NOW SEVERE'. Positions of 'insider' and 'outsider' are not always straightforward (e.g. Mullings, 1999; Mohammad, 2001). I am committed to the political aspirations of Deafness, I love BSL, *and* I like hearing things with my hearing aids, and using oral English. I see my position therefore as both Deaf and deaf, and I usually write it as D/deaf. Being part of both hearing and D/deaf worlds has however led to a number of ethical dilemmas.

Ethical dilemmas

This thesis has been framed around the notion of disability and whilst I am questioning the link to corporeal normality, I am still looking at D/deafness in relation to disability, which as I know very well is against what some D/deaf people believe in and in many ways is a hearing view (e.g. Ladd, 2003). Whilst I agree with Ladd that D/deaf people are a linguistic minority, at the same time, they are also structured as disabled, and this bears upon our understanding of

[63] The Council for the Advancement of Communication with Deaf people (CACDP) accredits four BSL levels: Stage One - beginners, Stage Two – intermediate, Stage Three and Four – advanced. See website http://www.cacdp.org.uk.

D/deafness. In my opinion, because D/deafness does not fit into the traditional configuration of disability as abnormal and pathological, is precisely why it is important to explore D/deafness in relation to disability. In other words, I want to look at both Deafness and deafness at the same time. I am also aware that this thesis is written in English and so isn't accessible to D/deaf BSL users and D/deaf people with poor English skills. Furthermore, due to the use of geographical language I know that it is difficult to translate. Sign is a practical rather than abstract language; terms such as embodiment are therefore difficult to convey. Ethically however I am committed to making sure that D/deaf people can access this study. Subsequently I will be writing summary versions of this thesis, with a limited amount of complicated terminology, to send to D/deaf Internet sites and print publications. At the same time, I will be working on a BSL version of the study to be made into a video.

As well as ethical dilemmas relating to positionality, there are also general ethical issues when researching with D/deaf people. Local Deaf communities are small and everyone knows each other. When snowballing contacts, I was often asked 'have you interviewed [name] yet? This is a difficult question to answer without revealing previous interviewees. I resolved this issue by using the reply 'good idea'. Although all the names in this study have been changed, and any identifying features especially geographical locations have been removed, inevitably through friends and relations, some anonymity will be lost. A further feature that makes snowballing difficult is the ability to see sign conversations from a distance. Sign users don't 'eavesdrop' anymore than oral language users, but the potential for accidentally catching the drift of a conversation is greater in sign. So asking people if they would be part of a study can be difficult in certain atmospheres such as Deaf Clubs. In general, whilst D/deaf people will sign to each across the room, if the conversation is private they will move closer together. Thus, opportunities for making contact with people can be created if approached with consideration. In this study, I approached BSL users individually and avoided asking people to participate when attending group events.

In this study, as some of the research was conducted on the Internet, there were also a number of ethical dilemmas relating to the use of email as a research tool. First, whilst lurking on chat-groups is common behaviour, if the material is going to be used in research then a declaration of intentions is needed (Miller & Slater, 2000; Hakken, 1999). As yet, there are no accepted ethical guidelines for research on the Internet (Brownlow & O'Dell, 2002). However, some chatgroups create their own rules that specifically relate to research. For example, Deaf-UK does not permit blanket requests for participants without an explanation of what the research is for and subsequent feedback of results.

> 'Whilst Deaf UK is a public forum, please respect Deaf people's need for space and not to be guinea pigs for research. It is not acceptable to just join Deaf UK, and then post an e-mail asking for information for research. This makes Deaf people feel used and as if they are in a zoo...As a balance to this, Deaf people recognise that research does have its value. Therefore, in addition to you participating in general debate, if you wish to ask members of Deaf UK to contribute to a piece of research, then you must clearly state: what the research is for, who you are, as well as the usual questions relating to the subject of the research itself. If subscribers of this group agree to your request, then cooperation and information, is conditional to fulfilling an undertaking to publish the research findings via Deaf UK.' (Deaf-UK website 1/3/03[64]).

Consequently, instead of posting the questionnaire straight onto the message board I provided a brief description of my research and asked people to contact me if they wished to participate. This also ensured informed consent. A second ethical problem relating to e-mails is the difficulty of preserving anonymity (Selwyn & Robson, 1998). However, whilst it is true that all e-mails can be intercepted most users accept this as an unlikely possibility. In this study, once the e-mail questionnaires had been returned, all identifying addresses and names were removed before they were copied and stored as data. Third, some people use the Internet to explore different identities and so may not have been genuinely D/deaf. Based on previous knowledge and a good understanding of specific chatgroups however (see Coomber, 1997), I am as certain as I can be

[64] http://groups.yahoo.com/group/deaf-uk

that all the responses in this study were authentic. Indeed, in most cases the names of the D/deaf people replying were already known to me through other sources.

D/deaf people and technology fieldwork - preliminary stage

As this study was concerned with D/deaf people's feelings and perceptions towards technology, a qualitative approach was adopted, and reflecting the range of communication choices used by D/deaf people a combination of methods were used.

Questionnaires - Pilot

In the preliminary stages of the study, the opportunity arose via two roadshows, run by Somerset Lifelong Learning Development Plan: Widening Participation Project and the University of Bristol Access Unit, to distribute a questionnaire to D/deaf people who attended. These two free one-day roadshows were both concerned with D/deaf people and their access to information about assistive equipment. The first was mainly aimed at deafened people and the second was aimed at deafened and hard-of-hearing people. The road shows were designed as open forums consequently a questionnaire was deemed the least intrusive method of contact that also fitted with the range of communication uses likely to be encountered. The questions were open-ended and aimed towards qualitative responses. Using questionnaires in this way is however difficult. Indeed, although thirty-one completed questionnaires were received (response rate 56%) most of the answers were brief and so the data was rather limited, especially in comparison to the richness of insights gained from the interviews. Nevertheless, as a pilot study it did clarify the relevancy of specific issues prior to the construction of the question schedule used in the in-depth interviews, and the questions sent via e-mail.

In-depth interviews

Visual methodology seems the most appropriate choice when researching with D/deaf people, especially, the use of photograph or video (e.g. Thoutenhoofd, 1998, Rose, 2001). And moving beyond the spoken word as authentic research

practice (Mirzoeff, 1998) can only be welcomed when trying to incorporate sign language. However, as I wanted to know what D/deaf people thought about technology asking them seemed to be the best option. Using video diaries or photos would in this case feel like I was bypassing BSL. Thus, for community and embodied space I decided to use conventional interviewing techniques. However, BSL training, especially beyond Stage One, is difficult to obtain in some areas. Luckily, as the University of Bristol houses the Centre for Deaf Studies (CDS) and has an access initiative for D/deaf students, BSL classes are run at all three stages[65]. As I had passed Stage One a number of years ago, in the preliminary stage of this study I attended a Pre-Stage Two class (two hours a week for twenty weeks) and then moved on to an extensive Stage Two class in the second year (five hours a week for a year). These classes enabled me to become proficient, although not fluent in BSL; they were also a lot of fun. For the interviews, to facilitate a shared exploration of perceptions about technology an open question schedule was devised (see Appendix One). Having been advised by a BSL translator some questions were modified so that the subject of the questions were more clearly highlighted (see later section on interpreting issues).

Cyberspace-emails

As most of the traffic and communication on the Internet is conducted via e-mail, this medium has great potential for communicating and researching with D/deaf people. However, as this is currently only possible in English rather than BSL it can be inaccessible to D/deaf people with poor reading skills and thus may not always be appropriate. As I was exploring the insights of D/deaf people who were already using and designing D/deaf websites, and thus conversant with written English, for this study I was able to use e-mail as a method of communication. To discover D/deaf websites I began with a general search (using Google, Lycos, and Yahoo) and the term Deafness. However, most of the first 100 hits involved medical aspects of deafness so I changed to the term Deaf Culture. This provided fewer hits but did guide me towards D/deaf search engines, such as Deafok (http://www.deafok.com). At the same time, I also

[65] These classes are expensive and I am grateful for funding received from both the ESRC and the Geography Department.

followed links from D/deaf organisation websites, especially the RAD. I then concentrated on UK sites or international sites that also represented the UK. Having identified these D/deaf websites, I discarded any that I felt were unlikely to be initiated and run by D/deaf people, such as the RNID, and any that had not been updated for years. I also continued my involvement with D/deaf chatgroups, which I have consistently found to be a major source of information about D/deaf issues. Following on from the questionnaires, two e-mails with a range of open questions were then constructed for site owners and site users (see Appendix Two and Three). Like the postal questionnaires given to deafened people, the questions were designed to elicit qualitative responses about perceptions towards technology, and whilst the postal answers turned out to be rather brief and thus limited in depth, the e-mail responses were overall longer, more detailed, and did provide insights into feelings.

D/deaf people and technology fieldwork - second stage

In-depth interviews

Through a snowball process, nineteen D/deaf people were contacted and subsequently interviewed. At the beginning of each interview a sheet with a brief introduction to the research and an assurance that all names would be changed was given (see Appendix Four), where people had difficulties with written English I signed a translation to ensure that consent was given. The interview schedule was semi structured, but also left flexible to explore issues raised. At all the interviews, a copy of the schedule was available for participants to look at if required. They each lasted on average about 40 minutes. This was partly determined by the requirements of the interpreter who needed a break after this time. Due to my own and the participants D/deafness the interviews were carried out in three different ways: With an interpreter in BSL; without an interpreter using a combination of voice and sign; without an interpreter using voice and written English. In all, fourteen interviews were carried out in BSL, three with a voice and sign combination, and two with voice and English. All names were changed to ensure anonymity.

In BSL with an interpreter

Although I am able to understand BSL well when receiving, I am less confident when transmitting. In addition, most of the interviews were carried out whilst I was still attending classes and so my proficiency was not consistent throughout the course of the interviews. Thus, I decided to use an interpreter when interviewing BSL users because I wanted to ensure that their views were properly represented. The interviews that required an interpreter were complicated to arrange due to the scarcity of qualified BSL interpreters. However, due to the presence of the Centre for Deaf Studies (CDS), the D/deaf Access unit, and a large number of D/deaf professionals and students in Bristol, provision of interpreters is higher than in other areas, although so are demands. Interpreters on average took three weeks to book[66] and the interviews often had to fit around their schedules. Having an intimate understanding of this situation however all the D/deaf people interviewed were willing to adjust the date and time of the interviews so that interpreters could be present. And thankfully, what used to be a lengthy process of having to meet face-to-face to rearrange appointments etc. has now been made infinitely easier by SMS and e-mail. Personally, I find them miraculous inventions that compensate for my difficulties in using standard telephones. Taking advantage of the fact that interpreters have to be booked for a minimum of two hours, in some cases when I was interviewing partners or family members two interviews were carried out consecutively, with a twenty-minute break for the interpreter in-between.

In voice and BSL

For the interviews, conducted by voice and voice/sign combination, e-mail was used to arrange the date and time. In the interviews, we both spoke orally but clarified with sign when we misheard or didn't understand what was being said. As D/deaf people are used to conversations that require work and a combination of methods none of these interviews felt uncoordinated. The exchange below, with Lianne, illustrates how queries about meaning are easily negotiated. Lianne mentioned text, I didn't hear the word text and queried what she had said, she recognised this and to help me understand immediately gave an alternative

[66] Bookings were made either through the University's Access Department or personally by me using SMS.

meaning of text as written form, I indicated that I now knew what she meant and the interview continued. Often in conversations with people who are unused to D/deafness, the word that hasn't been heard is repeated, sometimes several times, and the rhythm of the exchange is interrupted.

> Lianne: *'Yes, I would like to, if you for instance called me and you are hearing and you spoke and there was something that could translate that into text'*
> Ember: *'Translate that into?'*
> Lianne: *'Into written form'*
> Ember: *'Yeah alright.'*

In voice and written English

Arrangements for the time and place of the interviews were again made via e-mail, in addition the question schedule was sent prior to the interview. In the actual interviews both of us spoke and when we were unable to hear we referred to a copy of the questions and used written English to clarify what we had said. As the exchange with Mark highlights, D/deaf people assume they will understand other D/deaf people because they face the same difficulties.

> Mark: *'...if we are both deaf we understand each other automatically'*
> Ember: *'Right'*
> Mark: *'There would be little need for that device'* [one that enabled D/deaf people to communicate to each other]
> Ember: *'So there would be less need for it?'*
> Mark: *'Yes'*
> Ember: *'OK. So you think if both people are deaf then they just manage somehow?'*
> Mark: *'Yeah, that's right.'*

Of the nineteen people interviewed, fourteen were born D/deaf, three were prelingual deafened, and two postlingual. There were nine women and ten men. Seventeen communicated in BSL (although two were fluent in a different sign

language) and two didn't use it, but either knew some sign or they were learning some. All of the interviews, whatever the method, were audiotaped, my voice and either the interpreters voice translating the signed responses of the interviewees or the oral deaf person talking were recorded. In theory the most appropriate method for recording interviews conducted in BSL appears to be videotaping, however in practice it is difficult to do. As Ladd (1998) explains, when videoing a signer, the camcorder needs to frame the individual face on, for a natural conversation this requires a separate recorder for each person involved, which in addition need to be sequentially timed. Whilst this isn't impossible, it does make the interviews very formalised and difficult to analyse. Furthermore, as I had an interpreter at the interviews I already had a BSL translation. Moreover, videoing creates difficulties with anonymity and confidentiality (see also Valentine & Skelton, 2003). Bennett (2002) points out that tape recorders can inhibit researchers as they keep checking and rechecking whether they are working. In my case I am unable to hear when the tape has run out, and so as tapes are typically 45 minutes long this was another reason for the interviews lasting 40 minutes. I was extremely anxious about the tape recorder, and my gaze did indeed flit across to the machine, however, overall, I was mainly able to do this when the interpreter and interviewees were looking at each other and not at me. Although I did occasionally stop the interview and double-check the light was on. Everyone found this amusing and were sympathetic and knowledgeable about the difficulties in checking whether equipment is working when relying solely on vision already occupied in conversation. For the first couple of interviews, I instantly replayed the tapes to ensure that some noise had been recorded. I could hear whether a tape had something recorded on it but as I was unable to hear or understand what was being said, I also grabbed the nearest person in the Geography Department and made them listen to whether the interviews had recorded properly. Once I had completed the interviews, I arranged for them to be transcribed. I used a professional agency that had their own protocol on confidentiality, and numbered rather than named the tapes. Unlike my fellow PhD students, I therefore had copies of the interviews provided on Word within two weeks, which saved a lot of time! Background noise was sometimes a problem and having no idea there had been any other noises I was

surprised to discover comments from the transcriber saying 'sorry road works being conducted nearby' and 'police siren at this point'.

E-mail questions

Having identified D/deaf websites I sent e-mails (see Appendix Five) to twenty-six site owners (or webmasters) asking them if they would be willing to participate in the study. As these were individual e-mails rather than message boards, I also included the questions (see Appendix Two). A couple of these bounced back due to delivery failure and I was unable to find an alternative contact to re-send them to. Although four people replied and filled in the questions the same day, I also sent a reminder a week later. At the same time, I also posted a similar (see Appendix Five) general e-mail to a D/deaf chatgroup. However, this time in relation to accepted net-etiquette and to ensure greater confidentiality, I didn't include the questions, but rather invited people to contact me if they were interested in participating, and then once they had consented sent the questions to their individual e-mails (see Appendix Three). In the end, eighteen responses were received, of these, eight were site owners, and ten were site users. There were six women and twelve men: site owners - three women and five men, site users - three women and seven men. Fifteen were born D/deaf or deafened prelingual, and three were deafened postlingual. Fifteen of the eighteen used BSL. Many of the responses also contain individual queries about why I had asked particular questions and further details about my own D/deafness. Consequently, I read the replies as soon as received them and answered the questions by return e-mail. There is a lot of suspicion against researchers on the Internet, particularly in closed chatgroups. Whilst I made it clear that I was in the Geography Department, as my e-mail address and signature marks my association to Bristol University, I benefited from the presence of the Centre for Deaf Studies (CDS), which is well known and respected in UK Deaf Community.

All the data, from the interviews, and e-mail responses were manually analysed thematically. The questions already contained two themes, namely the personal and thus embodied aspects of interacting with technology, and the social

implications for the construction of D/deafness and Deaf Community. These were mainly discrete, although in practice they often became interrelated as the participants reflected on both aspects of being Deaf and deaf at the same time. I also concentrated on the political implications and the presence of emotions, memory and language in the interactions with technology. Moreover, I considered what wasn't there, especially choosing to not use specific technologies. For the interviews, initial interpretation and familiarity with the material is usually gained when transcribing. As I was unable to play back tapes to discover inflection or emphasis, I missed out on this process. Therefore, to remind myself of the dynamics, I re-visualised the interviews as I reread them, and for the seventeen that were conducted in or contained BSL, I re-signed the interviews back to myself. Once I had completed this process three or four times, I then searched each transcript for themes and highlighted them in different colour codes. I used the same process of reading, rereading and breaking down the material into coded themes in both the questionnaire data and e-mail responses.

Interpreting issues

Issues of confidentiality are covered by the ethical guidelines of interpreting, but using a translator, especially a BSL interpreter (known affectionately as 'terps'), raises a number of other issues. First, most BSL interpreters have an intimate relationship with Deaf Communities and will be well known to local D/deaf people. Extra time therefore is often needed for reciprocal greetings between the interpreter and interviewee. Second, the English translation of questions and answers depends on the individual interpreters understanding. Luckily in this study, I was able to employ the same interpreter for all but one of the BSL interviews. This resulted in a good working relationship and helped establish continuity in translation. In one interview, however, indeed in the one translated by a different interpreter, there was some uncertainty over specific meaning. In this interview, the D/deaf person, Conrad, also had his own interpreter present. We were discussing the nature of Deaf Community and Conrad originally signed.

The interpreter however queried the term 'transparent', because they didn't think it made sense. They then discussed it briefly with the second interpreter and together decided upon the term 'transient'. This word was then offered to Conrad and he accepted it and carried on with his response.

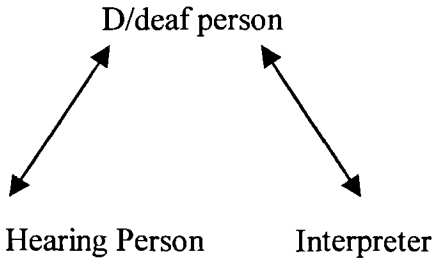
> *'So the Deaf Community is becoming more of a transient community in the sense that they are not meeting in the one location, the Deaf Club any more, but they tend to have gatherings around the country, so people are travelling more to different locations, um to have their various gatherings' (Conrad).*

However, we had been discussing whether D/deaf people still needed Deaf Clubs. In this context, following the BSL myself, I had understood the sentence *'So the Deaf Community's becoming a bit more transparent...'* to indicate the increasing presence of D/deaf people outside of Deaf Centres, with cultural Deafness in particular becoming more apparent in mainstream arenas. But because Conrad accepted the word transient and indeed framed his subsequent response around the term then so I have used this translation. Nonetheless, this example illustrates the potential difficulties that can arise over translation. A certain degree of discernment may sometimes be needed.

Third, when using BSL, the seating arrangement needs consideration. Edwards (1998) for standard interviews, recommends a triangular seating arrangement with eye-to-eye contact between the researcher and interviewee so as to access non-verbal communication. Because BSL relies on non-verbal communication, a triangular layout is already typical for conversations involving more than two people; eye contact is also crucial although will be less conventionally employed. Usually when a Deaf person uses an interpreter they are communicating to a hearing person. Thus, the polite form is for the hearing person to look at the D/deaf person, whilst listening to the interpreter and for the D/deaf person to look at the hearing person whilst they are talking and then turning to the interpreter for the translation and to sign their response, the interpreter therefore always looks at the Deaf person. Typically therefore the interpreter and the

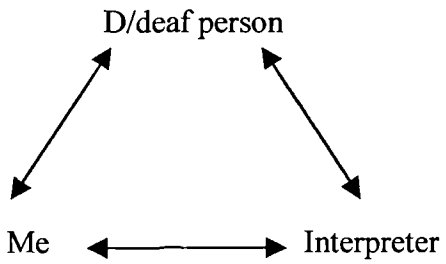
hearing person do not maintain eye contact, corresponding to the layout shown in Figure 4.1.

Figure 4.1: Eye Contact in a typical BSL interpreted conversation



But because I am D/deaf, in these interviews, I looked at the D/deaf person signing, and then needed to look at the interpreter to lip-read their translation, the D/deaf person also looked at me and the translator, and the interpreter had to keep turning to look at both of us. In other words, we all looked at each other, flitting our gaze accordingly, corresponding to the layout shown in Figure 4.2.

Figure 4.2: Eye Contact in the interviews in this study



Whilst this second layout may seem more polite, it is actually disconcerting to the D/deaf person being interviewed who is used to maintaining eye contact with the interpreter all the time; and I felt strange talking to people I usually sign to. In addition, because I didn't always hear the interpreter the first time, they often had to repeat the translation a few times before I understood. Thus, the interviews were not exactly flowing conversations. Even so, because everyone involved was used to communication difficulties the interviews didn't feel awkward. Moreover, translated conversations always have pauses; indeed knowing when it

is your turn to speak or sign is a skill that needs to be developed when using an interpreter. A further consideration in relation to seating arrangements is the light source in the room. Visual communication requires illumination from the front and not obscuring glare from behind. In these interviews because all three of us needed the best light, the decision over where to sit often resembled musical chairs, and for the interpreter a noisy few minutes whilst we dragged furniture around. Overall, working with an interpreter is a skill that gets better with practice. Personally, I valued the input over translation and welcomed the opportunity to share the interview experience.

Reflections on fieldwork

In hindsight, this research project, especially in relation to methodologies, could have been improved in a variety of ways. Whilst the interpreted interviews worked well, as a preference, I would have preferred to be fluent in BSL and thus able to conduct them by myself. BSL training however takes time, and as facial expressions and body movements can change the emphasis of the signs used, translation into English is an advanced skill. If however, I had been able to carry out the interviews without an interpreter then I would have been able to video record them, which would have enabled me to check nuances. In addition, I would also have had the option of being able to return to the participants and ask them to confirm their intended meaning. Although as the camcorder has to be focused directly on the face and upper body, video does formalise interviews in a way that audiotaping doesn't and it is difficult to know how much this would inhibit the interview process.

Researching minority groups in cyberspace can be difficult due to the general mistrust of lurkers. D/deaf groups are also wary of becoming guinea-pigs, and uneasy about their social space (in terms of D/deaf websites and chatgroups) being misappropriated, especially by hearing people. This makes access difficult and can I think only be remedied by time and association. There are only a few D/deaf websites operating that fitted into my criteria. I was therefore only expecting a limited number of responses from site owners. There are potentially more site users, although it is difficult to know how many hearing people (for

work or family reasons) are members of D/deaf chatgroups. Nevertheless, I would however have liked more responses from D/deaf site users. I had I think assumed that cyber users would be a different segment of Deaf Community. But in reality, as I got to know Deaf Culture better, I discovered that this was not the case. On reflection therefore, I think I should have publicised my research intentions to a wider field. Thus rather than just using cyberspace, I should also have publicised my request for participants in BDN and on ReadHear. Being known and recognised as legitimate is an important part of gaining trust when researching with D/deaf people and I should have extended my profile beyond the local vicinity. Using questionnaires to access qualitative data is also not ideal, although I have used them to good effect in the past in my Masters dissertation. Questionnaires can be valuable way to bypass difficulties with communication, especially for oral deaf people. In the pilot study, they were an added opportunity that unexpectedly presented itself and the data couldn't have been collected in any other way. For cyberspace, they corresponded to the mode of communication, (e-mail), the practices (virtual) of the respondents, and fitted well with D/deaf people's visual requirements. The quality and quantity of the data did however vary, with e-mail rather than land-mail used in the pilot study, providing richer responses. Different ways of administrating questionnaires, that are compatible with the range of D/deaf people's communication choices, for example having the researcher present, simultaneous e-mail link-up, could therefore be explored in the future (see e.g. Madge & O'Connor, 2002). In addition, as D/deaf people may experience difficulties with written English, the use of video BSL-mail could become invaluable. Overall, this study has been a complicated journey, where communication and sensory differences have led to choices that I have seen as negotiations rather than limitations.

Summary

At the beginning of this chapter, the contentious nature of disability research was discussed, highlighting criticisms from disabled people over the assumptions of normality that lay behind most research. Instead, they proposed the adoption of the social model that strives to include the experiences of disabled people, and challenges the status quo of both existing methodologies and traditional

definitions of disability. In effect, disability research should be for, and including of, disabled people themselves. The political nature of such research is unavoidable, and similar to feminist research, questions the feasibility of objectivity. Research with D/deaf people shares similar concerns, however as the next section of this chapter discussed there are also some unique aspects relating to the specificities of D/deafness. Deafness from a cultural perspective involves different ways of being, especially in connection to body comportment and visual attentiveness, and the use of BSL. D/deafness also confronts the hearing basis of interviewing techniques, and where both the participants and the researcher are D/deaf leads to negotiations over communication methods. Research with D/deaf people can be a cross-cultural exercise and so positionality is therefore an important consideration. Consequently, I have provided a brief précis of my own D/deafness and how this has developed through the course of the study. I then considered the ethical dilemma encountered through my location in both hearing and D/deaf worlds. General ethical issues relating to the size of local Deaf Communities and the ease of inadvertently viewing signed conversations were also highlighted. Finally, in this section of the chapter I also considered the ethics of using e-mail.

The chapter then moved onto the fieldwork and detailed the process undertaken in both the preliminary stages of negotiating access, and secondary stages of collecting and analysing the data in the methodologies employed. Brief profiles of all the participants were also included in this section. As the majority of the interviews were conducted with a BSL interpreter, issues relating to this process were then explored. In addition, the uniqueness of the situation when both the interviewer and interviewee are D/deaf was illustrated through a description of the seating arrangements and use of eye contact. In the last section of this chapter, I reflexively engaged with the whole study and considered potential improvements to each of the methodologies. Overall, researching with D/deaf people is a challenging exercise that should, I believe, confront audist assumptions. D/deaf perspectives add to the richness and diversity of understanding and so will further the development of geographical knowledge. The next three chapters are based on the perceptions and insights of the D/deaf

people who participated in this research. Chapter five explores embodied space, Chapter six considers community space, and Chapter seven looks at cyberspace.

Chapter Five: D/deafness, Embodied Space And Technologies

D/deaf people consistently engage with technology on the basis of their D/deafness and these interactions have become part of D/deaf embodied space. This chapter begins by highlighting the importance of embodied experience and the simultaneous inclusion of essential and cultural aspects of identity, which can be revealed through the associations of humans and machines. To explore the personal connections between D/deaf people and the embodiment of technology the chapter presents some of the empirical findings from the qualitative interviews, concentrating on four key areas. The first section highlights the nonhuman connections and relations that contribute to the practices and experiences of being D/deaf. In the second section, the varied inscriptions and meanings attached to specific technologies, and the impact this has on D/deaf people's identities are examined. In the third section, the intimate inclusion of technologies and the implications for D/deaf corporeality are explored. And the fourth section, concentrates on the significance of machines in connection to individual use of BSL.

Disabled bodies

As Leder (1990) pointed out, despite its inescapable presence, 'the body', prior to the 1990s, was mainly absent from social theory. Since then this omission has been remedied by a profusion of interest in all things corporeal (e.g. Butler, 1993; Shilling, 1993; Gatens, 1996; Davis, 1997; Burkitt, 1999), which geographers have also written extensively about (e.g. McDowell, 1995; Longhurst, 1997, 2001; Butler & Parr, 1999; Nast & Pile, 1998; Teather, 1999a) reflecting perhaps, as Turner (1996) has suggested, increasing cultural emphasis on the self, and the influence of feminist debate. As chapter two highlighted, disability theory has followed the same trajectory, although here the absence of bodies was a deliberate political strategy that, despite continuing with a dualistic framework, sought to challenge such a philosophy. Disabled people however, acutely experience the paradox of being both biological beings and social

constructions, and denying the interrelationship between them, led to an inadequate theorisation of both having impairments and being disabled. Partly, this is a reflection of the incongruity of nature, where

> 'On the one hand nature is valorized as the site of the proper, of the pure and uncontaminated, above all of the given and foundational, a location where the unnatural is literally out of place. And yet on the other hand, when set against culture, nature is at best base and unruly – that which must be controlled – and at worst that which is deeply disruptive and uncontrollable' (Shildrick, 1996 p. 2).

Any notion of being 'naturally' impaired simply doesn't fit. Thus, disabled people have to grapple with maintaining their own sense of normality whilst being labelled and identified through their bodies and/or minds as abnormal (see e.g. Watson, 2002). As Scheman (1993) points out

> 'The different are identified by their bodies - they are reputed not only to look different but to smell different and to have different capacities and tolerances - and it is obsessively their bodies that are mythologized, feared, loathed, exploited, tortured, or destroyed' (p. 188).

Whilst this is an extreme view, disabled people are constantly reminded of the perceived illegitimacy of their bodies (e.g. Davis, 1995). Butler (1993) highlighted this corporeal prescription in relation to gender and heterosexuality when she wrote that

> 'The category of "sex" is from the start normative; it is what Foucault[67] has called a "regulatory ideal". In this sense, then, "sex" not only functions as a norm, but is part of a regulatory practice that produces the bodies it governs, that is, whose regulatory force is made clear as a kind of productive power, the power to produce - demarcate, circulate, differentiate - the bodies it controls' (p. 1).

"Sex" can easily be replaced with "disability" and reflects analysis from disabled writers (e.g. Barnes, 1990; Swain, Finkelstein, French & Oliver, 1993; Corker & Shakespeare, 2002). However, abnormal categories are materially lived as well as discursive produced (see also Thomson, 1997: Seymour, 1998; Moss & Dyck, 1999). Disabled people can be physiologically different, and the conscious

[67] E.g. Foucault (1977).

creation of a shared identity that contains notions of essentialism, which 'naturalise' such differences, may inspire resistance to dominant discourses (see also Nelson, 1999). As Kirby (1997) suggests, rather than moving beyond essentialism,

> '... the challenge is to real-ize the ways in which we are inextricably immersed within the strange weave of essentialism's identity, and to acknowledge that this bind is one that is not merely prohibitive, but also enabling' (p. 72).

Subjectivity can thus be seen as comprising of an individual's identity *and* their fluid possibilities (Shildrick, 1997), which can also be powerfully constrained.

D/deafness and embodied space

In relation to D/deafness, as discussed in chapter three, a 'natural' notion of Deafness is an important part of maintaining a positive Deaf identity and this is both biologically based in D/deaf bodies and socially created in Deaf Communities. The regulation of D/deaf people has been and continues to be spatial. And through medicalisation and educational practices, etc. such prescriptions act upon and with the embodiment of D/deafness. Furthermore, as Thrift & Dewsbury (2000) state, 'everyday life is embodied and 'technologised through language and objects' (p. 41). Clearly being D/deaf is based on difference, in terms of language and discourse, but also on cultural, that is everyday, practices. D/deafness is thus based on an essential category, being deaf (preferably born or becoming deaf at an early age), and at the same time, is a socially maintained possibility (through Deaf Culture), both of which legitimise and foster Deaf pride. In addition, it resists perceptions of abnormality and embraces sameness. This supports Burkitt's (1999) reflection that bodies develop through cultural symbolisation and individual creation.

Objects, especially machines that are designed for D/deaf people, are also part of D/deaf bodies. Whilst Latour (1993) pointed to the recent proliferation of quasi-objects as a reason for the collapse between the opposition of nature and culture, the history of 'D/deaf' technology, especially of hearing aids, in chapter three revealed just how long such devices have been in use. Notions of corporeal

fragmentation due to machines are not new ideas, indeed Marx's concerns about alienation stemmed in part from the rise of industrialisation (Callard, 1998). And D/deaf people have navigated between human and nonhuman, and between nature and culture extensively for a couple of centuries. Thus, objects have also been an important component in the genealogy of D/deafness. However, just as Rose (1993), highlighting the dominance of a male viewpoint, argued 'he understands femininity, for example, only in terms of its difference from masculinity' (p. 6), D/deafness is difficult for hearing people to perceive especially in relation to the refutation of disability. Yet, as Corker (1999b) points out

> '...it is very clear that many deaf people see impairment and disability in terms of language and communication rather than impairment as the physical fact of hearing loss, which continues to be the main educational and legal classificatory system. They do not, in their personal narratives, talk about how much they can 'hear' as opposed to how much they can 'know', 'understand' and 'interpret'.' (p. 635).

When there is a strong commitment to cultural Deafness, 'hearing' is seen (literally) as difference rather than absence. Moreover, the intersubjectivity of the perception is not always available, for example, Crossley (1995) describing Merleau-Ponty's carnal sociology explained that

> '...the body has two sides, for Merleau-Ponty: sentient and sensible. It sees and can be seen, hears and can be heard, touches and can be touched' (p. 46).

D/deaf people, however, especially if profoundly deaf, can be heard but do not always hear. As such, they inevitably can have a different relationship to the world. As Crossley (1995) also wrote

> 'We experience by way of our (sentient) embodiment. Our body is our way of being-in-the-world, of experiencing and belonging to the world. It is our point of view on the world' (p. 48).

D/deafness is thus both inscribed and lived, relational and rhizomatic. Indeed the fluidity of D/deafness can be illustrated through the constant mediation of technology, which typically weaves around D/deaf experiences. This mutability

will be explored in the rest of the chapter through the personal responses of nineteen D/deaf people.

Characteristics of the D/deaf people interviewed

Nineteen D/deaf people (all adults over eighteen) were interviewed about their involvement with technologies used in connection to their D/deafness. As Table 5.1 shows, there were nine women and ten men.

Table 5.1: Characteristics of Interviewees

	Women	Men	All
All	9	10	19
Own D/deafness			
Born D/deaf	5	9	14
Deafened pre-lingual*	3	0	3
Deafened post-lingual**	1	1	2
Family D/deafness			
Other family members D/deaf***	4	4	8
No other family members D/deaf	5	6	11
Use of hearing aids			
Wear hearing aids	4	5	9
Do not wear hearing aids	5	5	10
Use of Sign language			
First language Sign	6	4	10
First language English	3	6	9
Use BSL	9	9	18
Do not use BSL	0	1	1

*Pre-lingual defined as deafened before the age of two.
**Post-lingual defined as deafened after the age of two.
*** Family members refer to birth family.

Seventeen were either born D/deaf or deafened before they had learnt to communicate. Of the two people deafened post-lingual, one was deafened at primary school age and the other as a young adult. Eight were born into families with other D/deaf members, such as parents, grandparents or siblings, and eleven were the only D/deaf member born into a hearing family. Nobody had a cochlear implant, but almost half (9) choose to wear either one or two hearing aids. Ten people specified that BSL (or sign language from another country) was their first language, and nine said that oral English was. However, this question was open to interpretation as some people answered in relation to the first language they

learnt as children and some to the language they used now. Certainly, the vast majority (18) use BSL to communicate, sixteen were fluent users, one person used it a bit, and one was still learning it. The one person who didn't use BSL was a young adult who valued his English abilities, but he also expressed an interest in bilingualism.

D/deafness and the embodiment of technology

In addition to the vast assembly of technologies that characterise present lifestyles in the UK, D/deaf people also have an array of assistive devices to choose from (see e.g. www.connevans.com). In this study, the D/deaf people interviewed indicated that they were using a variety of different equipment, which was typically signed as a long list of what individuals had, checked against a mental assessment of what was available, this included: e-mail; fax machine; flashing lights and/or vibrating pagers for alerts to fire alarm, doorbell, baby monitor; hearing aids; minicom (with other minicoms or TypeDirect); mobile phone (SMS); and television subtitles. The majority of these machines, such as visual or vibration versions of dominant aural equipment and amplification devices, were specifically designed for D/deaf people. However, they were not always seen as being compatible with the experience of being D/deaf.

Technologies and being D/deaf

The connection between technology and being D/deaf in some ways exists as a representation of what is perceived as needed by manufacturers, but also through Deaf campaigning. The majority of devices cover two basic functions - warnings about personal safety, and provision of communication with other humans. As such, these machines play a vital part in D/deaf people's individual and social lives. Indeed, as Mike and Andrea described, life without these devices was infinitely more complicated.

> *'And sometimes what would happen is, you would come out of the loo and suddenly everybody would be gone and you would think where have they all gone? And then when you went outside and they said, "where have you been?" But nobody informed me that there was an issue. I couldn't hear any*

alarm that supposedly had gone on and the boss was like "oh I'm sorry", you know, but nothing' (Mike).

'I mean most people would have to phone for me and that's not the same, it's like come on, you know, I've got my own business haven't I? And promotion, there wasn't any promotion possibilities, because if you are D/deaf you can't use the phone, you are stuck...' (Andrea).

Without technology, D/deaf people can miss vital aural information and instead have to rely on hearing people to accomplish everyday tasks. In general, therefore, the provision of assistive technologies increased individual confidence with being D/deaf, particularly as they enabled independence and provided access to information that D/deaf people have missed out on in the past.

'More confident, especially with being D/deaf definitely' (Abbie).

'What I like about the technology is that it actually improves my ability to cope with other people and make life much easier for me' (Mark).

'It's hard to look at oneself but I think when you do look clearly you probably do have more confidence because you have access to things that you didn't have before. More access to information, more control of your life so definitely, yes, confidence, it does enhance confidence I would definitely say' (Paul).

However, despite this valuation, these technologies were mostly relegated into the background of everyday D/deaf life.

'You know I'm just using it, it's there' (Jim).

'I just feel like it's part of life. You know, it's just like it doesn't change, it's just it's part of life' (Stacey).

'I use it more as a practical tool, it's not, you know, you don't exactly think, I like that, it's just run of the mill daily' (Lianne).

Partly this relegation of technology is an overt practice aimed at placing assistive equipment in the same place as devices that are considered non-disabled. It stresses the lack of connection between D/deafness and disability. This was highlighted in the experiences of flashing door and fire alarms alerts.

Flashing alarms

Hearing people have grown used to the presence of sound technologies, yet the 'audible past', present and future is continuously being constructed (Sterne, 2003). D/deaf people have the same safety requirements as hearing people, and flashing alarms are no different from aural alarms. Nevertheless, flashing alarms have to be purchased from a special shop, are more expensive, and are unlikely to be fitted in most public buildings, whereas the aural alarm is a legal requirement that is readily available. But even though assistive equipment for D/deaf people is designated as special, it is in reality as the D/deaf people here state, often mundane and everyday (see also Sobchack, 1995). However as Heidegger (1962) argued, whilst technology, especially everyday tools, may 'withdraw' and become part of the background when they are functional, once they are not working or missing they will become more apparent. As Jim explains, flashing light alerts may work at night, but in the day they are harder to see, and so he can miss people visiting or texting him. At night he can relax and let the light system alert him, in the day he has to be more vigilant and pay attention to whether the lights are flashing or not.

'At nighttime if it's a doorbell or Minicom or fax then obviously I know by the flashing light system. And then in the day, it's a little bit problematic because you can't always see it because it's in daylight. So there's a negativity in the day, but a positivity at night. Yeah so it's a bit problematic during the day when you can't necessarily see it' (Jim).

Similarly, as Paul related, non-functioning equipment can be frustrating and may involve increasing interaction to try and fix it. Instead of forgetting about the relationship, Paul had to keep attempting to repair it, but ultimately once further equipment broke, he gave up and withdrew his involvement.

> *'I'm fed up with trying to sort out the flashing doorbell in terms of the home. The Deaf Centre that supplies the equipment, or should install it, have just been absolutely lousy. But that's not the technology itself, that's the problem with getting it, but that's still part and related to the technology. I mean it's been years, I've been trying to sort out that issue and they keep inventing new things to say why, you know, it doesn't work or, and finally they put in the old system back again. Got home, switched on the lights and everything just went bang; the whole lot blew. So I haven't touched it since' (Paul).*

Practically doorbells and a doorlights are the same things as they both tell you if someone is at the door. But hearing has a wider range than vision in certain circumstance, such as typical UK houses. A doorbell enhances the ability to hear if someone is visiting, it enables people to move around their homes and still know if someone is at the door. If you are hearing and the doorbell stops working, you have to make sure you are closer to the door, but you can also do other things and move around within a hearing range. A doorlight displaces the ability to see if someone is visiting, it enables people to move around their homes and still know if someone is at the door. If you are D/deaf and the flashing doorlight stops working you have to make sure that you can see the door if you are waiting for someone; you can't do other things because you can't look away and you can't move from a narrow visual range. Thus, there are contextual differences. These technologies contain the difference between the binary of normal and abnormal. Thus, whilst assistive technologies for D/deaf people are often mundane at the same time they have added significance.

> *'...you know if it doesn't work what do you do? You need that equipment more than a hearing person does' (Paul).*

Added significance in this sense is about necessity. D/deaf people have extra equipment to convert aural information into a visual or tactile modes. Other technologies, such as cochlear implants (CIs), also have added significance because they have become part of the perceived binary between being D/deaf or being hearing.

Cochlear Implants

CIs are a highly meaningful technology as they sharply expose the divides between Deafness, deafness and hearingness. Medical professionals, technicians etc. who are developing CIs see them as miraculous inventions that are able to restore a 'missing' sense (e.g. Shannon, 1999; Levenson, 2000). But cultural D/deaf people mainly see them as continuations of oralism and the pathological view of D/deafness, which denigrates both Deaf Culture and language (Andersson, 1994; Bahan, 1989; Carver, 1997). Whilst D/deaf people accepted that adults can make their own choice about whether to have a CI or not, and indeed many deafened people do choose to have one (e.g. BDA, 1994; Tucker, 1998; Wood, 2000), CIs in D/deaf children are an area of tense debate (e.g. Carver, 1990; Lane, Hoffmeister & Bahan, 1996; Lane & Bahan, 1998).

> 'Cochlear implants are just the latest in a long line of attempts to assimilate deaf people on the hearing world's terms. They should never be seen as an alternative to learning sign language. The technology may be seductive, but the social and personal costs to deaf children can be catastrophic' (Spokesperson from BDA quoted in The Times, 2002).

Most professionals working with CIs are hearing, and the majority of D/deaf children have hearing parents, thus it is mainly hearing people who making the decision to implant D/deaf children (e.g. Baumgartner, Temmel & Gstottner, 1999; Parton, 1997).

> 'The fact of the matter is that it's hearing world. As a parent I want to give my son the choice - if he later decides to switch it off, that's his decision... But if you get anything the child doesn't have now - even if it's just being able to hear a lorry coming - that's a major advantage. It's a

connection with the world around you, which is a big thing' (Spokesperson from CICSG[68] quoted in The Times, 2002).

Part of the difficulty lies in the distinction made between normal and abnormal bodies and the way this is mapped onto services, employment opportunities etc. Hearing parents' want the best for their children and the children themselves, don't want to be seen as different (see e.g. Beazley & Moore, 1995; Gregory, Bishop & Sheldon, 1995; Chaikoff, 1998). This often, though not always, means a rejection of sign language and thus Deaf Culture. Adult D/deaf people can therefore feel shut out from the process and undervalued in their experiences and capacities to help young D/deaf people have a positive Deaf identity (Ladd, 2003). Moreover, they are against what they see as unnecessary experimentation on D/deaf children, which could be detrimental to their future health (ibid.).

In this study, a distinction was indeed made between adults and children. There was a general agreement that D/deaf adults should be free to make their own choice, and that D/deaf children were having CIs forced upon them, which could work against the successful formation of their Deaf identity.

'Horrible and I would reject them, and I certainly am very against it in relation to children. Adults, their choice, fair enough, their choice' (Ella).

'I think it's up to the individual. Obviously if there is a little child who has them, they can't really know all the information, it's up to the parents, but I think they should wait until the child is old enough for them to make their own decision, they shouldn't force it on anybody' (Rebecca).

'I've got a friend who's got a cochlear, I think if you have a cochlear as a child, that's what I would object to, that it's children who are being implanted. Because they haven't decided themselves, if they were older then that's different' (Kevin).

[68] Cochlear Implant Children's Support Group.

'It's difficult to say if it's wrong, because I think in many senses it's maybe their parents choice upon them. Maybe they didn't have any choice, maybe it was done when they were very young and they didn't know. But I think they should be banned personally. I think if it was a D/deaf person, why not just allow them to sign? And then it would be their own identity then that could flourish' (Tom).

Both Paul and Mike were exceedingly angry about CIs for D/deaf children. Paul felt that they were akin to child abuse and Mike believed them to be continuations of hearing oppression.

'The cochlear itself, the implant for adults, well fair do's but cochlear implants imposed on D/deaf children, I would say is child abuse. People who do it should be put in prison, preferably flogged, or become deafened themselves and have a cochlear implant enplaced upon them. As a general statement because, there are some grey areas within that of course, but generally that is my belief' (Paul).

'I think it's something forced upon us, yes? I mean I think hearing people, it's yes it's a forcing upon them. Whether it's hearing aids, whether it's cochlear, whether it's oral traditions, and they never listen to us as D/deaf people, yeah and what we want' (Mike).

Overall, the decision to have a CIs was framed around a distinction between being naturally Deaf (i.e. born Deaf) and unnaturally deaf (i.e. deafened and therefore culturally hearing). CIs interfered with this differentiation because their use is premised upon enabling speech and denying early sign language acquisition.

'I am not against them. It depends on who it is. If it's a born D/deaf baby and you are putting a cochlear upon a born D/deaf baby, when they are a little bit older, I am against that. But if you are born hearing and maybe over the age of 16 or 17, if you become deafened or through an accident,

then the cochlear might be fine for that person, because they have been through a whole hearing culture and upbringing. To change the identity of a D/deaf person would be very problematic' (Julian).

'If you are born D/deaf I would disagree with cochlear implants, I know that some people say that the acoustics are much better for perceiving speech. I mean OK, if the evidence is there I would have to accept it. But for me personally if a child was born D/deaf, I wouldn't want to implant them' (Conrad).

'I mean if you are born D/deaf you shouldn't be saying let's implant, you know, because a young child for example has no right to say, there's no say for them. They were never asked whether to be implanted or not. It's really, you know you are treating them in a sense like a guinea pig, I think you should just leave the child to naturally develop as and which they want' (Steve).

Whilst the majority of D/deaf people in this study were vehemently opposed to the principle of CIs for D/deaf people, there was a recognition that they could be useful for someone who had been deafened. Moreover, there was considerable awareness of the complexity of the issues involved, as Lianne's consideration makes clear.

'That's a hard call, I honestly don't know enough about the issue um, I don't know if the benefits are as good as they say they are. I understand the anger about them, but I also understand the fact that this is a hearing world, so I see both sides very well. I, if my child were D/deaf I don't know what I would do. Um, it's very easy to say that I wouldn't do it, but it would make an issue pragmatically, and if you see that there are benefits to it and that it will help the child be aware of sound, maybe you would do it. But then again, it's an invasive procedure, it's destroying whatever hearing a person has, I don't know if I want to do that' (Lianne).

Only two people mentioned that they had considered having a CI themselves. Mark, who is oral deaf and appreciative of the sounds his hearing aids provide, decided against it on a functional basis of improvements to his hearing versus the seriousness of the operation. He is however planning to review future developments and may in the end decide to have one, as he would like to join in more with his hearing friends.

> *'I have considered last year having a cochlear implant. I have discussed it with several of my D/deaf friends, who have cochlear implants. But at the moment I fear that the disadvantages outweigh the advantages, at the moment, because cochlear implants not only have to be clarified*[69]*, but in my case to clarify, understand it, would not enable me to hear, but other people think so...* [shrugs]*' (Mark).*

Abbie, who was deafened as an adult, has also decided against CIs, but in her case on the basis of them interfering with her acceptance of her D/deafness.

> *Well, when I first went deaf, the doctors were saying to me that I could have one, and I really, really wanted one. But that's because I was focusing on everything that I'd lost and all the things that I couldn't do anymore, and I thought the cochlear implant would be the answer and give it all back to me, but then thinking about it I realised it wouldn't and the cochlear implant doesn't make you feel, and I think that's a problem with a lot of people think it's just like a magic solution but it is not. I think, I have heard, the surgery is not very nice. I had a test for it and it really is painful, and as for giving it to small children, I think that is awful. I think people really are better to just accept that they can't hear as well as other people, but to focus on all the things they can do, I see it as a positive thing' (Abbie).*

[69] CIs stimulate the acoustic nerves, but the wearer has to be able to process these impulses. The implantee has to be trained to 'clarify' sounds, i.e. translate the impulses into meaningful noises. This training takes time and is particularly difficult for people who have been born D/deaf.

Thus, even though CIs are specifically manufactured for D/deaf people, D/deaf adults are not in general using them. They have been placed outside the experience of being D/deaf, as they are seen as incompatible with a positive view of D/deafness and the use of sign language as 'normal'. Thus, the rhizomatic connections of technologies affect the meanings attached to them, and so they may impact upon D/deaf identities in disparate ways.

Technologies as markers of D/deafness

As the majority of spatial arrangements are typically based upon the concept of the 'normal body', disabled people often have to utilise assistive equipment. Whilst these devices, on a mechanical basis, are not that different from devices used by non-disabled people they are inscribed with positional status. They mark people's disability, they alert us to differences, and can help explain which impairments are present. Thus, as this passage by Brown (1995) explains, disability can be revealed through the embodiment of nonhuman encounters.

> 'I began to consider myself a person with a disability, slightly more than slightly, when I began to use a cane to get around at all times and people started to ask me what was wrong. I began to consider myself a person with a disability, quite a little bit, when I began to borrow a wheelchair to get around in the mall, or the zoo, or anywhere where there was a lot of walking and standing' (p. 105).

In Brown's (1995) case, he was able to actively mark his own use of various technologies to positively embrace his new disabled identity. But this marking also operates in all directions and is mapped onto the binaries of normal(superior)/abnormal(inferior). D/deafness when considered a disability can be described as invisible; there are no obvious clues to its corporeal presence; it mainly becomes noticeable when D/deaf people are using special equipment. In this study, the intrusiveness of assistive equipment, especially when it impinged upon body spaces was highlighted as a problem. It made D/deaf people stand out, and thus made them feel 'different', which may be read by others as 'abnormal'. As Stacey points out, some of the technologies aimed at D/deaf people, especially in connection to fire alarms, are very noticeable.

'The fire alarms, they are very big, it's almost like a siren and it's feels very patronising in how the system works. Compared to maybe a hearing system for hearing people, it's very minimalist but I think the equipment for D/deaf people is very obtrusive and that wouldn't be my choice' (Stacey).

Being marked out by technology and feeling awkward is particularly apparent in public spaces, where the association with technology is highly visible and inscribed with dualistic meaning, which as Mark explains can make him feel uncomfortable.

Mark: *'It improves my confidence* [at work], *but when it comes to socially having a big computer just standing there, I'm not, not really comfortable'*
Ember: *'Do you feel that's because people look at you?'*
Mark: *'That's the point, people are very rare with deaf, they are not really. Understandably, they don't have much understanding of the world of deafness'.*

However, the significance of these connections is mutable. Technologies, as Thrift (1996a) points out, are 'heavily contextualised'. Thus, as the exchange with Rebecca reveals, the same technology that marks 'abnormality' in public spaces can be seen as 'normal' in home spaces.

Rebecca: *'I feel more comfortable with using them at home'*
Ember: *'More comfortable?'*
Rebecca: *'Yes, than outside because I don't feel people really understand why you need an interpreter, why you need to speedtext*[70] *when they are speaking. But um once I say, someone immediately understands'*
Ember: *'So at home they just feel normal'*
Rebecca: *'Yeah'.*

[70] Speedtext is a communication system comprising of two laptop computers and a human speed typist that can be used in, for example, lectures. The hearing typist listens to the oral presentation and types live subtitles on to one machine that can then be read by the D/deaf person on the other computer screen.

Ember: *'Yeah? Whereas, how did they feel when you are here?'*[at work]

Rebecca: *'It's not normal'*

Ember: *'Right, OK and you think that matters?'*

Rebecca: *'Well people resent them I think and they see you'*

Ember: *'So you think other people look at you?'*

Rebecca: [nods].

The relationships that people have with technology cannot however simply be contained by the opposing poles of technophobia and technophilia (Sophia, 1995). Hearing aids in particular have an ambiguous position.

Hearing aids

Hearing aids are interesting because from a hearing perspective they are considered the most obvious marker of being deaf.

> 'These hearing aids are, you see, more than just aids to my hearing. They are alterations to my identity. Now I'm truly, no doubt about it (just check out the size of these two behind-the-ear models), deaf at most, hard-of-hearing at least. Of course, I've really been this way all along. But suddenly the cost and size and appearance of this technology behind my ears has re-marked me, even if the technology hasn't quite yet re-made me' (Brueggemann, 2001 p. 9).

Yet, many D/deaf people don't wear them. As a specific technology, they thus slip in-between a number of binaries. Hearing aid users are touchingly attached to their hearing aids. They are close to their company through their mimetic adherence to their skin; in their electronic ability to amplify, they embody a perception of sound. At the same time, they are also part of various heterogeneous networks involving medicine, science, manufacturing, and ideology. Because deafness is considered an impairment and this is equated with abnormality, so D/deaf people are expected to wear hearing aids.

> 'Completely unaware that he was being addressed Kevin continued with his conversation. The library patron became very angry and abusive. At this point I stepped in, asked him what his problem was, and pointed out that Kevin was deaf. The library patron went into a great tirade about how

> Kevin should "wear those things in his ears". Through gritted teeth, I asked him why he thought Kevin should wear uncomfortable – and, in Kevin's case, totally useless – hearing aids. He replied, "so that we (hearing people) will know that he is deaf' (Moon, 1994 p. 706).

D/deaf people are expected to embody technological objects, 'unnatural' things, in order to be considered normal. Indeed, as Rebecca explained, hearing aids are often considered miraculous inventions that can transform a deaf person into a hearing person.

> Rebecca: *'Well people think because, because you've got hearings aids in and especially when they see you with hearing aids in, they think you can hear perfectly and forget you are D/deaf, and they walk away still talking, and you have to explain to them it's not like an absence you can't hear properly with hearing aids in. But they don't understand. I've still got analogue ones, I don't have digital ones yet and they are not perfect, they break down easily and they make funny noises and you don't know what's going on sometimes, but I don't know, maybe digital ones are more clearer, but?*
>
> Ember: *'I don't know'*
>
> Rebecca: *'But I think they, you could have more problems because they amplify everything not just human speech. There's the background noise and that could be a nightmare'*
>
> Ember: *'Do you like wearing them?'*
>
> Rebecca: *'It's a necessity really, I prefer not to, but if I want to have a conversation, I have to because it's what I rely on'*
>
> Ember: *'Why do you prefer not to?'*
>
> Rebecca: *'They are not very comfortable. You need to get used to them. You have to. I prefer to be free and have the wind in my ears!'.*

But as D/deaf people know well, hearing aids do not completely restore hearing, they amplify all sounds including painful ones, they can distort sounds, and there are times when hearing aids remove an emotional experience such as feeling the wind blowing. Choosing to wear hearing aids therefore is not always a

straightforward decision, although a chief criterion for using them or not is whether they work, which for profoundly D/deaf people is not always the case.

> *'I never use one now, because it helps me in no way. But when I grew up, I had one, because I had to. I was forced to really. But they don't really help me in any way now' (Julian).*

> *'When I was younger, in school they forced me to have two hearing aids yeah, but all I got was kind of distorted sound, I couldn't make out the actual words themselves. It was just noise you know. When I finished school, I took 'em off and I threw 'em away, and I've never worn them since' (Mike).*

Both Julian and Mike chose not to wear hearing aids because they didn't feel that they gained any benefit from them. But in the past, when they were both children, they had been *forced* to wear them by the practices of an oral education system. For them hearing aids were embodied markers of hearing oppression. Rejecting them now was thus both a personal and a political decision. Both of them were very clear about their D/deaf identity and, as BSL users, neither of them felt the need to be in any way hearing. For them, D/deafness is not an impairment and they are therefore not disabled. Murdoch's (1998) spaces of prescription and negotiation are both in operation, as both men embrace their D/deafness and choose to not heed the dominant message of oralism. Here the corporeal fact of being deaf, cultural politics based on notions of 'normality', and expectations of natural comportment from both a hearing and a D/deaf perspective are all entwined in the decision to not use hearing aid technology. Mark, on the other hand, enthused joyfully about his aids as he felt they gave him access to emotional experiences, such as music and wider communication options that he felt his deafness denied him.

> *'Hearing aids, I think they are the best invention ever, in the history of the deaf. Because not only have they allowed people to hear but they enable people to experiment and explore, understand and send*

information...I want to do this because I want to learn how, for example I do need it to play the guitar and piano that I haven't yet learnt...' (Mark).

Mark, however, did not have a Deaf identity. He had only just begun to discover Deaf Community, which he was clearly starting to appreciate, but he also wanted to fit in with his hearing friends. His hearing aids and other assistive equipment enabled him to do this, and so he valued them. For Mark, hearing aids let him be a little bit hearing. Although as the exchange below, in which he talks about wishing there was 'discreet' technology, indicates he was very aware that the visibility of his technology use marked him out as different and so he remained deaf.

Ember: *'Is there anything you wish you had that you haven't got?'*
Mark: *'Um, microlink, a short, like a microphone, but portable'*
Ember: *'A portable microphone? Oh yeah'*
Mark: *'Placing it with a big TV, a table, and be very discreet thing up in the air socket, nobody can see it. You can hear immediately'*
Ember: *'Right, so almost like your own loop system that you could just plug in when you want, yeah that would be good. But something that you could do so other people didn't see as much, is that what you mean?'*
Mark: *'Yes, that's what I mean'.*

So, whilst hearing aids are seen as being part of being D/deaf, in reality they are also part of being hearing, although as Abbie makes clear, they do not make D/deaf people completely hearing.

'I mean, having a hearing aid on, it just helps to have a little bit of sound but it's not the same as being hearing' (Abbie).

Thus, hearing aids are fluid movers. They can be seen as 'boundary objects' (Star, 1991) that move between binaries. Indeed, because they are mobile, hearing aids can be used instrumentally as tools that can be adapted to specific contexts.

'If I'm talking to a hearing person yeah I use my hearing aid, but with a D/deaf person, no there's no need for them, yeah, I can just sign directly to them' (Tom).

If hearing aids work, then, choices can be made over their use. As hearing aids are not Deaf, when signing in Deaf social space or relaxing in D/deaf home space, the aids are not always needed or wanted. With hearing aids, D/deaf people are identifiably disabled; they pronounce their impairment. Yet, D/deaf people who use them reject these labels as they recognise that behind the terms impaired and disabled lies the notion of abnormality. When taking it easy, when being with other D/deaf people they don't need equipment that marks them as different. At the same time, whilst aids may enable participation in hearing things they also in some ways remove D/deaf people from their D/deafness. Hearing aids thus shift around and are both hearing and deaf; disabled and not disabled. They perform connections and traverse binaries. Moreover, being mechanical aids that are intimately incorporated to bodies, hearing aids explicitly disrupt the boundaries between human and machine. Indeed hearing aids and other assistive technologies mark D/deaf people as disabled and different precisely because they are positioned within body spaces.

Technologies and D/deaf bodies

'The body' is the site of anxieties about natural order (Balsamo, 1995). And as Teather (1999b) reminds us, 'the sort of body that we have prescribes the particular map that we use to navigate our life worlds' (p. 12). D/deaf people, as chapter three explained, have long been seen as threats to the natural structure. Subsequently the bio-politics of D/deafness contains a mesh of embodied practices aimed at the eradication or alleviation of D/deafness. These have centred on two related areas, making D/deaf people hear and getting them to communicate orally. D/deaf people who value their different abilities and mode of language have mainly rejected these aims, but many deafened people anxious to reclaim their body capacities have welcomed them. Both aims are premised upon a 'natural' notion of 'the body' that is constantly based on an average

approximation of corporeality, which mainly disregards age. However, despite this powerful view of pathological D/deafness, D/deaf bodies are

> '... constructed, not by once-and-for-all acts, nor yet by intentional processes, but through the constant reiteration of a set of norms. It is through such repetitive practice that the body as abled/disabled is both materialized and naturalized' (Shildrick & Price, 1996 p. 94).

Thus being able to hear is so entrenched as 'normal' it can be difficult to comprehend the desire to be D/deaf. This was well illustrated in the recent world-wide media furore over attempts by two Deaf lesbians to ensure that their baby would also be Deaf (e.g. Boston Globe 2002; Montreal Gazette, 2002; Sunday Times, 2002; The Age, 2002). For cultural D/deaf people, resistance to this construction of abnormality (which is also linked to disability) coupled with an opposition to oralism is tied in with connections and relationships with technology. To restore or remove D/deafness, ever more sophisticated technologies have been developed and employed. And because D/deafness is a sensory difference, the site of this engagement has always been centred on D/deaf bodies. Moreover, as technology has got smaller and smaller so the relationship with body spaces has become increasingly more intimate.

Overall, in this study there was a preference for technology that functioned outside of body spaces. The weight and inconvenience of carrying equipment, especially paging alerts for fire alarms, was highlighted as a particular problem that not only interfered with body spaces, but also interrupted the rhythm of embodied practices.

> *'I mean, I suppose to me it feels like all the time it's extra baggage. All the time and I feel like you can't relax. It's like you have to have it with you and if I don't have it with me then there's a risk, but that feels like a weight' (Howard).*

> *I hate having pagers. I don't like um..I feel it's very confining. I prefer the strobe alarm that gives you much more freedom and you can move around. The pager you have to remember to wear it, you have to*

remember to replace the batteries, you have to remember to put it on your bed if you are going to be sleeping; it's just so tedious. I just leave it on my bed because if I take my hearing aid out at night I don't hear anything. So, I have to do something, so other than that I don't use it, because it's more trouble than it's worth. It's kind of sort of counter to what it's supposed to do. It's supposed to free you up but it's not exactly doing that' (Lianne).

'I mean with the flashing lights system, you feel very comfortable, you don't have to continuously check it all the time, but the pager which is with you all the time, you are always checking' (Julian).

Hearing aids were again highlighted as being particularly difficult to negotiate, especially on an emotional level.

Hearing aids

Over half of the nineteen people interviewed (10) chose to not wear hearing aids[71] and of the nine that wore them, three wore them only sometimes. On the whole, where a decision had been made to stop wearing hearing aids, either full-time or part-time, people felt that they were much calmer, and as Mel and Steve both suggested, less unsettled by the unfamiliar sensation of loud noises.

Mel: *Well I lost them for two weeks first of all and then when I put it back on, I felt quite kind of unsettled by it, um I mean I still have them and sometimes for work I'll wear them, but you know not if I'm going out like.'*

Ember: *Unsettled because of the noise, or because they made you dizzy?*

Mel: *'The noise, the noise aspect, yeah just the loudness and you are kind of thinking where's that coming from, yeah?'.*

[71] All but one of the nineteen people interviewed had worn hearing aids at some stage in their life. Typically, they either still wore them or had been made to wear them at school.

'I mean I should wear hearing aids myself really you know to maybe pick out everyday sounds in everyday life, but sometimes, you know, I want to take them off...I mean there can be advantage in that sense, but sometimes if you are running there can be a problem. They might fall off or you might just feel a bombardment of that outside sound, and when they are off you can get tinnitus as well and it can feel like a migraine feeling, yeah?' (Steve).

The removal of hearing aids to reduce stress levels was mainly exercised in the private space of the home. As Conrad pointed out, he had to wear them at work, but when he was at home could choose not to.

Conrad: *'...I wear them at work, but I don't wear them at home. So I could call myself a part-time hearing aid user'*
Ember: *'Why do you turn them off at home?'*
Conrad: *'Well why not, it's my choice. I actually like it when there's no noise, because it reduces stress but at work I have to have my hearing aid'.*

This element of choice was also a crucial component in Laura's decision against wearing digital hearing aids, where the lack of volume control inhibited her autonomy.

Laura: *'I have used hearing aids all my life so I feel it's important to...but I had the old one, analogue. I try digital, but it not help me. I don't like them because they are adjusting automatic'*
Ember: *'Oh yeah, there's no volume control'*
Laura: *'Yes, so I haven't, so I don't like that, I like to* [do it] *myself'.*

CIs were less ambiguous than hearing aids, as they were again seen in a negative fashion, not just for being oralist and thus a threat to being D/deaf, but also in relation to their unique position, i.e. placed *within* rather than *upon* a person's body.

Cochlear Implants

Whilst Conrad appreciated the complexity of the CI debate, he was also uneasy about the intimacy of their connection.

> *'But really cochlear implants to me are invasive. They are invading your body space there. It's like putting something actually into your skull' (Conrad).*

Mel had similar concerns about the implications of the surgery, especially about the permanency of the implant.

> Mel: *'It's not like a hearing aid, because obviously it's within the skull. I mean a hearing aid you can choose to switch it off or on. Pull it off or on, but a cochlear is imbedded in the skull that's a completely different issue. Yeah it's really quite unnerving.*
> Ember: *Unnerving because it's inside you?*
> Mel: *I just feel, you know, why? Why cause that amount of damage in terms of to embed that in. A hearing aid is something, you know, that well it's just not the same as a cochlear, it's just not the same as a cochlear, it's a completely different issue'.*

The appearance of a CI was also something that people felt unsettled about. This tied in to notions of unnaturalness, but this time in relation to a machine/human connection disrupting corporeal boundaries.

> *'But I actually, I think actually, it looks awful, when you look at somebody who's got one, it looks really awful' (Jim).*

> *'It's like a disfigurement, like you are disfiguring somebody. Like it feels like you have to take more care, like you would have to be careful how you touch somebody because of this implant, yeah?' (Steve).*

Howard was also emphatically against CIs on the basis of this essential notion of nature. CIs in his opinion were a scientific step too far that interfered with bodies in general, and specifically lacked respect for D/deaf people's different bodies.

> *'No, I'm sorry I just say no. I think you should respect these people for as they are. I really do. I mean OK there's technology and maybe it has its uses in certain situations, perhaps. I feel with this, people are playing with science' (Howard).*

A demarcation between humans and machines was maintained despite the everyday engagement and incorporation of various technologies. Again, this is partly a reaction to being positioned as abnormal, which the use of technology can exacerbate. Interestingly, on two occasions BSL (human) interpreters were mentioned in connection to which equipment was used. But in both cases, this classification was quickly rejected because technology was considered mechanical.

> *'...and interpreters, if you could call that equipment, but maybe it's not equipment, an interpreter?* [shakes head and continues with list]*' (Ella).*

> *'...interpreter, but then they are not equipment, no they are not equipment* [continues with list]*' (Stacey).*

As machines get smaller, the insertion of technology is becoming more intimate, which breaks down the perceived borders of bodies. Whilst decreasing the visibility and weight of equipment helps to blend assistive devices into body spaces, the lack of control and further shift towards unnaturalness is problematic for D/deaf people, particularly as technology is a main component in both the binary of normal/abnormal and the differentiation between oral and sign language.

Technologies, D/deaf individuals, and BSL

Whilst social attitudes are inscribed upon specific technologies and bodies, nonetheless different and uniquely individual choices and interpretations can also be inserted (Frank, 1996). Of course, this agency is not always easy nor is it unmediated by other things. D/deaf people have to maintain a positive view of their D/deafness in relation to a normal/abnormal construction and at the same resist the supposed dichotomy between speech and sign. Oralism, as highlighted in chapter three, has a long history and this legacy of oppression has affected the position of Deaf Culture. Whilst the Government has now recognised BSL as a language, there is still a long way to go before D/deaf people feel that it has been given the legitimacy it deserves. Most of the D/deaf people in this study (16)[72], even if they were bilingual, rated BSL as highly important to them and they were strongly attached to its use in terms of their D/deaf identity.

> *'It's really high, highest importance, because it's my first language of course' (Julian).*

> *It's very, very important for me. I use sign language every day, even at home of course as well. It's part of me, as a person. I grew up with it, at least in the last twenty years, not in the first twenty perhaps, as I was saying before. It's part of my life, a very strong part of my life, even at work I use it all the time' (Conrad).*

> *'I like it, I use it, um it's part of me. It's useful I think sometimes it expresses part of me that I can't say in English and I've met people through it that I wouldn't meet otherwise' (Lianne).*

The use of sign language, coupled with the legacy of oralism and the resultant lack of confidence with written English skills that many D/deaf people experience, has created a tension within the area of communication technology.

[72] Of the eighteen who used BSL, one person only used it a bit, and another, although a fluent signer, felt that it was not that important in his life.

Minicoms

As chapter three highlighted, textphones, known as minicoms, were eventually developed in place of aural telephones. The D/deaf people in this study appreciated the presence of this technology and the autonomy it gave them.

> *'I remember before when there was no Minicom, I mean keeping in touch with D/deaf friends, how could you do that? And also it meant I had to rely on another person, or a neighbour, if I wanted to ring about a holiday, or bank insurance or whatever, or car insurance. And now I feel completely independent. I can phone anyone' (Julian).*

However, as textphones are based on written English, they were on the whole dissatisfied with this technology, especially in conjunction with the TalkDirect service, which was considered inefficient and somewhat impersonal, although better than no service at all.

> *'You go through Typetalk*[73] *and they ask your name, you type that, your address, you know your account number, again and again and again. You are just going through it relentlessly, it's so frustrating...Mistakes come up in the typing, meeting times are wrong, it's very, very risky that the mistakes can lead to miscommunication' (Andrea).*

> *'I think, I don't know, sometimes I think they go off at a tangent, I don't really know actually how you would improve it? Can't think, maybe that they don't make any mistakes, yeah?' (Kevin).*

> *'...but if you think about the days prior to that you'd have to go around begging hearing people to make a 'phone call for you. So you have to think about that, I mean that's probably the number one worst thing linked to being D/deaf, where you have to beg people every day, yeah. And thank god I don't have to do that you know, you know, and I'll put up with Typetalk if that's the case' (Paul).*

[73] Typetalk is now called Talkdirect (see footnote 53) but many D/deaf people still use the old name.

As they are gradually being replaced by new communication technologies, such as e-mails, videophones, and mobile textphones, minicoms are presently passing through networks.

E-mails, videophones, and mobile SMS

The D/deaf people in this study were increasingly using e-mails, but the reliance on written English was again causing some anxiety, especially in connection to hearing people.

> *'For a D/deaf person, the response will be very brief, for a hearing person it can be endless and then I think, do I have to respond back in the same way, in the same length, whoa' (Howard).*

> *'There is a difference if I'm e-mailing for example. The English, if it's a hearing person I try very hard to make sure that the English is right. If it's a D/deaf person, it's just like well what the heck, and I can be much more relaxed; and the reply's different as well. Sometimes the English is problematic if it's a hearing person responding, whereas the English from a D/deaf person will be much easier for me to understand' (Julian).*

Some people were also using the new videophones, but the graphics are exceedingly jerky and they are presently incompatible with existing flashing light systems. By far the most popular communication technology was the SMS on mobile phones. Text messages were being used extensively; indeed some people were slightly embarrassed about the amount they daily sent and received. SMS was replacing minicom use, because as Andrea and Mel explained, it made contacting other D/deaf people so much easier and quicker, and at the same time, also made it possible to directly contact hearing people without needing an intermediary like the TalkDirect service. Moreover, as Steve pointed out, SMS is not especially for D/deaf people and so in principle there is equal access[74].

[74] Some phone packages appear to charge D/deaf people for voicemail and other aural services that they don't have access to, however it is possible to negotiate a text only service.

'It feels like now, it's easier, because I mean you have SMS for starters, you can contact hearing people now through that, whereas before it's been a problem. You know, it's just like, you know, I want to do it myself, I didn't want to rely on somebody else, so that's a big difference' (Andrea).

'I think really technology is allowing D/deaf people to collaborate more easily because of it, and if you think about using the Minicom previously to phone work or phone home, it's quite cumbersome. Now with an e-mail or SMS it's just so instantaneous. Yeah, yeah, I'm lazy now' (Mel).

'I mean SMS is a service that you need and you are getting it the same as a hearing person would, yeah...and it also acts as like an intermediary between two worlds and it's like a D/deaf breakthrough in that sense, because we can have access to everything' (Steve).

Whilst SMS, like e-mails, are still based on written English, the brevity of the possible message is more in keeping with a BSL grammar system. The subject usually comes first and the communication is more direct and to the point. Consequently, with SMS there is less language conflict. SMS fits into D/deaf embodied space as they can be used in conjunction with a D/deaf identity. Furthermore, SMS do not interrupt the expected rhythm of everyday life in the UK. For people with corporeal differences this is a crucial aspect of their embodied experience (see e.g. Robillard, 1997, 1999). Mobiles are now an established technology so there is a correct (i.e. normative) way of using them, which blends into the surroundings (Laurier, 2001). This already includes non-aural features, e.g. vibration alerts and text messaging, therefore D/deaf people can use SMS, even if they are using it in a DEAF-WAY, without being seen as different. Even so, as BSL was the preferred mode of communication by all but two of the D/deaf people interviewed, there was a great deal of interest in further developments of the videophone and mobiles that can send pictures.

'Something like a mobile with pictures, so that you could sign into it, like a videophone, but mobile, or maybe on a watch so you could sign onto your watch face, yeah' (Kevin).

Thus, despite not always wanting to be seen as different, D/deaf BSL users are not the same as oral language users, whether hearing or deaf, and would be happy to embrace 'special' technology. It does however make life easier if the technology they are using is already in step with everyday practices. This shift appears to be happening, as communication technologies, increasingly visual, are moving away from being exclusively hearing towards being both hearing and D/deaf, and thus able to transmit both oral and sign languages.

Summary

Changing facets of nature complicate the embodiment of difference. Perceived as pure, nature is expected to be unpolluted. Yet, nature gets out of hand and flows free of its borders. The natural, and normative, notion of 'the body' is clearly challenged by corporeal differences that are culturally categorised. Having an impairment leads to a constant negotiation of binaries, which are both discursive and material; biological and social. Corporeal classifications are constructed through the insistence of binaries, but at the same time, they are also based upon essential aspects of bodies. Thus, being D/deaf is a multiple position. Constructed as disabled, on the basis of abnormal bodies, and rejecting this view perceived as naturally Deaf, on the basis of being born with a sensory difference, D/deaf people are always both deaf and Deaf. Disabled by dominant discourse and enabled by their own identity and creation of community. And as we have seen in this chapter the fluidity of these interactions can be revealed through an examination of the embodiment of technology.

As the empirical data in this chapter showed, D/deaf people can utilise a wide range of assistive technologies, which mediates their experiences of being D/deaf. The D/deaf people interviewed in this study, used equipment to access information and provide independence from human aid, which increased their confidence. These devices mainly formed part of the background of everyday

life, but became prominent when they were not functioning or, paradoxically, when they were absent. Mechanically and functionally similar to technology used by hearing people, assistive equipment for D/deaf people is nevertheless inscribed as 'special' because it is mapped on to the normal/ abnormal binary of bodies. In addition, some technologies, especially those designed to give a perception of sound, were perceived to form part of networks of oralism and so were believed to further the pathological notion of D/deafness. Cochlear implants in particular, were an area of tense debate that most of the D/deaf people in this study rejected using in relation to being Deaf as opposed to deaf and thus culturally hearing. The oral networks of CIs are seen to work against sign language and therefore were incompatible with being Deaf. By bringing attention to their sensory difference, assistive technology can mark D/deaf people as disabled. The visibility of equipment is therefore an important component in D/deaf people's relationship with technology. Unfortunately, assistive equipment can be very noticeable, which sometimes made the D/deaf people in this study uncomfortable, especially in public spaces where the presence of the devices could be read as strange. Hearing aids in particular occupied an ambiguous position as they marked out deafness, but at the same time could also be 'a bit' hearing. How D/deaf people felt about them and how they were politically positioned was a crucial component of their employment. As such, hearing aids are fluid movers, part of rhizomatic pathways, which can negotiate binaries and so break down oppositions between them.

The movements and connections that exist in these interactions affected embodied space as the associations operated upon bodies. The overall preference appeared to be for devices that existed outside of body spaces, especially ones that did not interfere with the rhythm of everyday practices. Individual autonomy and control over technology was also important. Whilst hearing aid users appreciated the capacity to hear some sounds, they also enjoyed switching them off and removing the interference to their 'natural' corporeality. Hearing aids, even when many people choose not to use them, were nevertheless acceptable in relation to D/deaf bodies precisely because they lacked permanence. CIs however were rejected because they entered too far into the perceived borders of

D/deaf bodies. The intimacy of the connection made people feel uneasy and concerns were expressed about their unnatural appearance and the relationship that this had to the pathological notion of D/deafness. Technology is co-opted into the normative ideal and for D/deaf people this includes the dominance of oral communication. BSL was highlighted as very important to the majority of the D/deaf people interviewed and so communication technology for D/deaf people, predominantly based on written English, was a difficult area for them to negotiate. Minicoms were being rejected in favour of the SMS service on mobile phones, which, although they cannot transmit BSL, can nonetheless be used in a DEAF-WAY. Consequently, they are the most popular technology encountered in this study and there was a lot of enthusiasm about their use. Even so, further developments of videophones and picture mobiles, that allow BSL conversations at a distance, were keenly awaited.

This chapter has focused on D/deaf people's experiences of technological interactions from an individual and embodied perspective. However, as D/deafness can be a shared understanding, these connections are also affected by practices of Deaf Community. The next chapter therefore, explores technological encounters through a collective perspective.

Chapter Six: Deaf Community Space And Technologies

As being D/deaf can be an individual and a group experience, any consideration of D/deafness needs to include the relations of Deaf Community. Therefore having explored the embodiment of technology on an individual basis in the previous chapter, this chapter extends the focus to the associations between Deaf Community and technology. Beginning with a consideration of community in general, these notions are applied to Deaf Community, highlighting the ways this sense of belonging operates in the UK. Continuing to explore technological connections, the chapter then presents further empirical data, which is divided into four key areas. The first section concentrates on belonging and identification with Deaf Community, and highlights the ways individuals define this collective experience in relation to their D/deafness. The second section focuses on technological negotiations and the relationships that Deaf Community has with specific machines, especially hearing aids and cochlear implants. The third section reveals the importance of shared spaces, and explores feelings towards the presence of technologies in these Deaf spaces. The fourth section considers technological associations in mediation with BSL from a community perspective.

Community and belonging

Whilst there is little consensus over the definition of community there is nevertheless an understanding that the notion contains some elements of belonging, which are often connected to a territorial area and based on gemeinschaft ties of kinship, neighbourhood, or friendship (Bell & Newby, 1971). In addition, Anderson's (1983) suggestion of 'imagined communities', where members may never meet but still feel connected, has increasingly been accepted as an important component. Furthermore, grounding this 'imagination' these connections, as Rose (1990) points out, will be based upon certain political, economic, social, or cultural conditions. Moreover, as self-identification develops through communication with others (Hetherington, 1998), aspects of a common language are also contained within ideas of community. Community therefore is a complicated notion and it contains a wealth of co-existent

contradictions. Belonging for example, is structured against not belonging and a community will be bordered by physical or symbolic boundaries. However, as diasporic identities in particular highlight, belonging is fragmentary, as essential points of origin, both geographical and figurative, are in fact positionings that are constantly being constructed (Hall, 1990). Or as Hall (1996) also puts it, they follow 'routes' not 'roots'. This can be seen in Dwyer's study (1999) of British Muslim women, where being a Muslim was imagined in opposition to British society, but was also full of heterogeneous and fluctuating identities. Thus, whilst communities may be defined as bounded by beliefs or areas, they are also fluidly moving, created through discourses and not always tied to a particular place. Indeed, as Rothenberg's (1995) examination of lesbian communities in the USA showed, the adaptability of the term allowed 'lesbians to construct the idea of community to fit their particular circumstances...' (p. 172), so they could be both 'everywhere' *and* spatially concentrated. Deaf Community in the UK operates in a similar way as D/deaf people live in all locations, but have concentrated around specific services such as educational or religious institutions. Whether these associations constitute a 'true' community has been disputed (see e.g. Ladd, 2003), however D/deaf people refer quite readily to DEAF-COMMUNITY and clearly feel a sense of belonging and connection to each other.

UK Deaf Community exists nationally via organisations (e.g. BDA) and a newspaper (BDN), but it is mainly experienced at a local level through different Deaf Communities usually based around a Deaf Centre or Club[75]. Proximity is therefore a feature. However, whilst the local Deaf scene may be small in terms of numbers it can be fairly widespread geographically, and does not constitute a neighbourhood. As chapter three revealed, the historical origins of most Deaf Clubs was primarily religious and this influence continues to be exerted to a certain extent (Jackson, 2001). However, most Deaf Centres and Clubs now operate as meeting places with weekly or monthly social evenings alongside various interest groups such as Deaf sports, yoga, and youth meetings. There will be some kinship ties, however most D/deaf people will not have D/deaf parents, so genealogical lineage will be limited, although Deaf generations have played a

[75] Ladd (2003) states that there are currently over 250 Deaf Clubs or Centres in the UK.

vital role in the continuation of BSL in the face of oralist oppression. D/deaf people from hearing families are often 'late-comers' to Deaf Community (Kyle, 1991), and may have experienced difficulties accessing it (e.g. Ladd, 1991; Skelton & Valentine, 2002). Thus, friendship ties are a particularly important feature of Deaf Communities that inevitably foster relationships and the formation of D/deaf households. Alongside local experiences, there is also a sense of an 'imagined community' at both national and global levels, where the use of sign language, albeit country specific, and a shared experience of oralism provides connections. This fits well with Rose's (1990) definition of an imagined community where

> '...a group of people [are] bound together by some kind of belief, stemming from particular historical and geographical circumstances, in their own solidarity' (p. 426).

Individual identification as a Deaf community member is typically rooted in a history connected to the use of BSL and in the UK to the shared experiences of boarding school or PHU education (see e.g. Kyle, 1991). Being D/deaf is primarily seen in opposition to being hearing and an oral communicator, but the level of commitment and connection towards other D/deaf people may vary.

> 'I think a lot of people think that, in the Deaf community, it's just one closed group, and it's exclusive. That's not true - there are deaf people who prefer to be with hearing people, there are deaf people who only want to be with deaf people - that whole variety is there' (Dore, 2003 p. 2).

In relation to the USA, Padden (1989) proposed the following definition:

> 'A deaf community is a group of people who live in a particular location, share the common goals of its members, and in various ways, work toward achieving these goals. A deaf community may include persons who are not themselves Deaf, but who actively support the goals of the community and work with Deaf people to achieve them' (p. 5).

However, whilst this definition captures the complexity of D/deafness - as it also contains hearing Deaf people and elements of resistance to oppression - it is nevertheless rather dry. It fails to convey the emotional significance of D/deafness where the most important aspect of being part of Deaf Community is

a sense of pride in being D/deaf, which is well illustrated by the joy attached to the birth of D/deaf babies.

> 'Givona is the fifth generation of deafness in our family and my father, he is amazed that he has a Deaf granddaughter, he's told everybody at the Deaf Club 'My granddaughter is Deaf!' and they've celebrated - they've had many drinks of a night time and celebrated that Givona, his granddaughter is Deaf' (Ridgeway, 2003 p. 1).

Ladd (2003) musing over what a visual representation of Deaf Culture would look like gives the best portrayal of Deaf Community, as he conveys the importance of participation, mutuality, and historicity.

> 'The pictures spoke of communities all across the world who were experiencing joy in their collective existence, a defiant pride in their sign languages and deep pleasure at the sight of new generations of small children taking the first steps to reproduce their thoughts and feelings on their hands. They spoke of people whose lives were not motivated by a sadness in not being able to hear birds singing or who were not primarily motivated to come together by any sense of loneliness or exclusion, although, being human, such emotions could still be recognised. They spoke of oppression of these communities by those supposedly charged with responsibility for their welfare. But they also portrayed a clear sense of the ingenuity, determination and humour by which they struggled to resist that oppression' (p. 3).

D/deafness is thus both an individual and collective experience that is characterised by self-identification and group belonging. The embodiment of technologies therefore has a wider impact and the mediation of various devices impinges upon the practices of Deaf Community.

Practices of Deaf Community

Of the nineteen people interviewed, seventeen were members of their local Deaf Community, although two people described themselves as part-time members as they had limited participation in some social events, largely due to other commitments. The two non-members were both young adults who mainly or always used oral communication.

Belonging to Deaf Community

A sense of belonging and identification with other D/deaf people was clearly experienced by the D/deaf people in this study as they all defined Deaf Community in terms of sharing, meeting, associating together, and communicating in sign language.

> *'It is a place where Deaf, signing Deaf people, come to meet, come together and they share a similar feeling of belonging in that centre and they would feel more comfortable and relaxed in that place' (Howard).*

> *'It's a community, umm, people who share the same difficulties who come together in terms of their way of life, a unity, yeah' (Kevin).*

> *'The Deaf Community is where Deaf people meet up, like in Deaf Clubs or in Deaf Pubs. Or Deaf people meeting in pubs, or through friends that you knew from school, or perhaps people you know from your hometown, the various links like that' (Conrad).*

> *'In general, Deaf Community feels like a home sometimes, where you can sign...' (Laura).*

Connection to a local Deaf Club or Centre was acknowledged, and indeed was still seen as important for social evenings and specific circumstances such as women's health. However, meetings were also widening out into generalised environments, such as cinemas, or pubs.

> *'Well the Deaf Community hmm it's a close group. It's about information being passed round and shared and you can meet at the Deaf Club. Historically the Deaf Community may have always met at the Deaf Club but now it could be in lots of different places like the cinema, because there might be subtitles, so it's widened out. And historically again it would have been a very close knit group at the Deaf Club but now it's much more disparate' (Ella).*

'From my perspective, my view, it's a group of people who are sign language users, and the majority of those will be from Deaf school, some mainstream or from units. The Community itself can be very varied as to where it took place, in the pub, could be the Deaf Club, it could be meeting in other environments. But wherever it is run by Deaf people and they could then be sub-communities themselves. It doesn't have to be the Deaf Club' (Stacey).

Highlighting the diversity of Deaf Community, Tom and Julian both stressed the various routes towards membership. Julian not only listed some of the different demographic and interest groups contained within the term Community, he also underlined the complexity of D/deafness by including hearing people with D/deaf parents who are fluent BSL users.

'Mostly the people within it are Deaf and they are usually BSL users. They have obviously, well usually grown up being Deaf. They could be a hearing person if their family was very strongly Deaf, or maybe a hearing person who learnt sign when they were very, very young. In the Deaf Community they are not all the same, there are different sub-groups - older people, church people, gay, lesbian, lots and lots of sub-groups. Football - a whole range of people' (Julian).

Tom highlighted the cultural variations of D/deaf people and the fluidity of D/deafness, where self-identification can in fact be hearing.

'It's a minority group, it's a Deaf group, well certainly in terms of the big 'D' Deaf, political Deaf is a minority group. If you think about small 'd' deaf, umm they probably feel more of a hearing identity. I suppose it depends on their personality or maybe their personal experience in terms of how they feel, where do they feel more comfortable with, with Deaf people or with hearing people? You know, and maybe you might lean towards more towards the hearing world. It's a complex word Deaf, it's a complex word and it's difficult for, you know, to kind of encapsulate it in

one explanation. Depends on the person, where they're from. You know are they from [place name], *are they from, you know are they black, you know. You know maybe you'd have a different perspective for the Black Deaf Community to the white Deaf Community and there would be different communication therein and different culture and they might be interested in different things, so it really depends' (Tom).*

Higgins (1987) stated that membership of Deaf Community '...is an achieved status, not an ascribed one' (p. 151). Thus being deaf does not automatically lead to being Deaf. However, this is a complicated area, D/deaf people born into D/deaf families were seen as having a natural heritage within Deaf Community, although as Mel points out this is connected to their locality.

'If you are born Deaf or if you have been learning sign all your life, then you can have that automatic natural membership. But how you become formally involved, I don't know. So, because myself, because I've grown up Deaf I am automatically in it' (Julian).

'I mean I would be automatically in there because I'm born Deaf and from Deaf family. My parents are Deaf, so I have that link with the Deaf Club and the Deaf Community instantaneously. But say for example I move to a new place, I wouldn't immediately be immersed in that Deaf Community. It would take time to build that rapport and have that link, yeah?' (Mel).

D/deaf people born into hearing families however made their own route towards Deaf status by formally joining a Deaf Community, usually through participation in a Deaf Club and crucially by learning BSL.

'I think if you are born into a Deaf family, then obviously you are automatically part of a Deaf Community in that sense. But if you are raised maybe within a hearing family, or with deaf but with an aural upbringing, it will take time to fit into that Community because you will

have to learn to sign, and you will have to build those friendships...' (Kevin).

This was often a prolonged process and gaining the acceptance of other D/deaf people had not always been easy.

'I feel that Deaf people with Deaf family, Deaf generation, it is easy for them...but those with hearing family, they have to work extra to live with Community. Some is working hard, some is easy' (Laura).

'I think that for me I had to kind of formally join, go through that process, because I'm not fully embraced in the Deaf world, I've only been in the Deaf Community I would say for about [number] *years. You know I'm still learning to sign, you know some things are still difficult to pick up on...'(Tom).*

'Then I left school, never went to the Deaf Club not at that point, until about [age - young adult]. *Then I thought check it out. Now the impact on me was that they wouldn't accept me, because I couldn't sign, I would use my voice, I went to an oral school and it was very, very, very, difficult to be part of that group. And it was probably another three years before I gained some acceptance, I felt very pushed out, they never asked me to be involved in things' (Howard).*

Participation in social events whilst important may decline when D/deaf relationships and families have been created. Consequently, alongside BSL communication, the main criteria for being seen as a member of Deaf Community, is the emotional acceptance of D/deafness as a positive experience, in particular having a D/deaf and not a hearing attitude.

'...you can be deaf and you can have a hearing attitude and that just blocks you off from the Deaf Community, so I don't think it's automatic I think it's a matter of choice' (Rebecca).

'I mean I would say if somebody wants to join from the outside then they would have to have a positive attitude towards Deaf people, a knowledge of Deaf Culture, and they would obviously have to learn BSL...' (Julian).

The expression of Deaf attitude is difficult to describe, although it is some degree based on visual rather than aural orientation. There is also resistance to being positioned as abnormal and the promotion of oral communication at the expense of sign language. Consequently, D/deafness has become entangled with negotiations of various technologies.

'It depends, say for example, are they a sign language user, are they a hearing aid user, do they have, wear a cochlear implant, it could be very varied. And also it depends what the community accepts' (Stacey).

Technologies and Deaf Community

Bijker (1997) suggests that technologies develop in 'technological frames' where new inventions are influenced by preconceptions based on existing devices (see also Mackenzie & Wajcman, 1999). This also operates in relation to corporeality; preconceptions, especially those based on a normalisation paradigm, drive the development of machines. Thus, the majority of technologies that have moved through the history of Deaf Culture have been aimed at enabling D/deaf people to hear and so in turn communicate orally. Presently, this mainly involves hearing aids and cochlear implants.

Hearing aids

As we have already seen in the previous chapter, wearing hearing aids is an embodied personal choice, however they are also a social decision because the reactions of others influence the feelings that surround them. Politically, hearing aids are wrapped up in past discrimination over sign language use. D/deaf children were urged to talk, made to wear hearing aids whether they wanted to or not, and were punished for using sign language (BDA, 1993; McDonnell & Saunders, 1993). Consequently, hearing aids occupy an ambivalent place in Deaf Community. Even so, the D/deaf people interviewed in this study believed that

someone who wore hearing aids could be part of Deaf Community as it was felt to be an individual choice.

> *'I see no harm in that, no, not from my perspective, no harm in that at all. You know if a profoundly Deaf person wears a hearing aid, then yeah I see no difference' (Stacey).*

> *'Yeah you could be part, yeah I mean each to their own, you know' (Ella).*

> *'... what's wrong with a hearing aid anyway, if you did want to use something, what's wrong with a hearing aid?' (Andrea).*

Perhaps due to discrimination against D/deaf people, individual choice is considered an important part of D/deafness. Stacey, Ella, and Andrea, who all choose to not wear aids, enshrined this notion. So did Lianne, but she has chosen to wear aids and so gets angry when she feels that her personal choice is compromised.

> *'It's up to the individual, who wants it. I use mine because it works well with me. I don't think anybody should be forced to wear one. I wear it because it helps me to be aware of sounds; again back to the safety issue if there is a car coming, at least I have some idea of the sound. There are times when I don't wear it, but it's worked for me but that's not to say that it's going to work for you. So again, I get very angry with people who think it's their right to decide with somebody else whether or not they can have one. I really think it's if you want to do that, fine, if you don't want to do that, fine. We'll leave the person where they are at' (Lianne).*

Thus, whilst hearing aids are both deaf and hearing they can also be Deaf, although they have a precarious relationship. Some D/deaf people feel that they are out of place in Deaf Culture (see also Carver, 1994). Having swapped round

the words hearing and culture, these sentiments can be captured by a line from Irigrary (1993)

> 'I have already lost some of my culture as a result of the noise they call hearing. If I listen to them, I risk losing even more of it' (p. 102)

However, despite these feelings Conrad continues to wear hearing aids and is able to maintain his D/deaf identity and position within Deaf Community.

> *'When I am signing with Deaf people, normally I don't have my hearing aids in. But sometimes in a work situation, I'll meet other Deaf people and they will be like what are you doing with hearing aids in, before you didn't have hearing aids in, now you've got them in. So I have to just kind of say, hey it's not a big deal, it's my choice and so on. Some people who are real Deaf radicals, they think that if you wear hearing aids you are deaf with a small 'd' rather than with a capital D, cultural Deaf. So well I just say well hey that's your view, it's my own individual choice. It's my character and my personality that's important, not the hearing aids. It's settled down a little bit, but I remember, like maybe the late 80s to the 90s, it was really terrible, people were like not attacking each, but confronting one another about having hearing aids in' (Conrad).*

Alongside whether hearing aids work, what seems to matter the most was the emotional and ultimately the political reasons for wearing them, especially whether the person wearing the aids developed a hearing attitude as this could indicate that they were not interested in cultural Deafness. Being able to hear is seen as nothing special. As Howard explained, if the hearing aids were used for the personal enjoyment of certain sounds then there is no problem. But if the hearing aids are used to make D/deaf people feel bad about being deaf, then the use of aids can lead to conflict because they clash with the observance of Deaf Pride; if they exclude then they are being used in a hearing way.

> *'It depends it depends on what your hearing aids are kind of for. My partner previously never had hearing aids, had them, but never wore them. But why* [not] *put them on say for a music situation? But if they*

wear wearing hearing aids for the purposes of maybe taking in sound in a different way, then sometimes it puts maybe other Deaf people at a disadvantage. So, maybe somebody who was using the hearing aid to pick up a sound that the other Deaf person who was not wearing a hearing aid can't pick up on. Sometimes they will think that person has the advantage over me, because I didn't hear that. I mean that's just my view, you understand, but I think it causes some kind of conflict there' (Howard).

Thus, depending on how they are used, hearing aids can be included within Deaf Community; as such, they traverse the divide between being D/deaf and being hearing.

Cochlear implants

Cochlear implants (CIs) also intersect the lines drawn between Deafness and hearingness. However, unlike hearing aids, as we have already encountered in the previous chapter, CIs are firmly seen as hearing instrument and there is vehement opposition against them (e.g. Lane, 1984b; Lane, Hoffmeister & Bahan, 1996). The decision for deafened adults who are viewed to be culturally hearing is accepted as a personal choice, but the decision to implant D/deaf children[76], especially those born D/deaf, is seen as a Community issue. Ladd (2003) argues that implanting D/deaf children is cultural ethnocide, as these children will not have access to their Deaf cultural heritage and in effect will be excluded from Deaf Community.

In this study, whilst wearing hearing aids did not prohibit Deaf Community membership especially if the individual exhibits a Deaf attitude, a CI was a more difficult technology to incorporate and opinions over their use varied. Mel viewed both hearing aids and CIs in a similar fashion, as she believed that Deaf Community membership depended on having a Deaf attitude and so the technology was incidental to the human emotions of belonging.

[76] The first child implant was carried out by Chounard in France in 1977, and was soon followed by House in the USA in 1980 (see e.g. Blume, 1999). The implant programme in the UK, via the NHS, began in 1989. Just under 2,000 children had received a CI by 2002 (The Times, 2002).

Mel: *'Yes, yes you could. I mean most people who have a cochlear, maybe if they have them later when they are older, I mean people that I know they've had them when they are older, and they've already got that link, already, so yeah. I mean, it's I don't know it depends on how you judge a person but yeah'*

Ember: *'It depends?'*

Mel: *'Personally, I think it's more important, I mean if you have a hearing aid or a cochlear that's not the issue, it's the person, the person's important'.*

Similarly, both Rebecca and Steve felt that CIs were a personal decision, but they were also keenly aware of their problematic status.

> *'Yeah, for myself, I'm open-minded and umm you know everybody should work together in that respect; no matter what or who you are. It's about who you are that is important, yeah?' (Steve).*

> *'...you are not automatically hearing you do have difficulties and even though they promote speech, some people still rely on signs with them, but I don't know. I know some people think they try to umm destroy the Deaf Community by forcing them to have them, but it's up to you really' (Rebecca).*

As Andrea explained, whilst people with a CI can in principle be part of Deaf Community they will nevertheless find acceptance difficult. Personally, she recognised their presence, but preferred to avoid the conflict they presented.

> *'Yes, some people are* [part of the Deaf community] *but I do feel actually sorry for them because some people do, you know, some Deaf people are very, very wary of them yeah. But it may not be their fault, a parent may decide on their behalf. I mean say for example, yeah, I mean if somebody's got a cochlear implant I think it's best just leave it be. If you try and talk about it, it's just going to make it worse, if you try and argue about it, just kind of let it be' (Andrea).*

Both Kevin and Ella highlighted the difficulties that D/deaf people with a CI may encounter. Negative comments, both overt and covert, may be made about their use, which can create an uncomfortable atmosphere. Ella recounted a situation from the previous week, where a CI user received a lot of reproach, which she found unpleasant.

> *'I think you can* [part of Deaf Community] *but there will always be some people, comments made, especially from older people I think, or young people who don't really understand the implications of cochlear. Yes but I think you can be part of the Community, yes' (Kevin).*

> Ella: *'Well I know a lot of people who would be very dismissive of those who had* [a CI]*'*
> Ember: *'Why do think that is, do you think it's to do with attitude?'*
> Ella: *'Yeah, yeah attitude'*
> Ember: *'From whom, from the people without the CI or the attitude of the person with it?'*
> Ella: *'The attitude of the other Deaf people around them, for example last Friday night at the pub, somebody came who had a cochlear and people were just talking about him, you know, so it was you know, pretty ugh'.*

In the face of this hostility, it is not surprising that CI users are perceived to be withdrawing from Deaf Community.

> *'I do remember one, D/deaf man, who lived in* [place] *and he had a cochlear implant, umm but just checking about his involvement, he's involved, but he's mixing, but I see that he's withdrawn, holding back in some way, yeah' (Mike).*

As Howard pointed out, whatever the attitude towards D/deafness, the presence of a CI is making a statement that positions an individual towards being hearing as the feelings of Deaf Community are clearly against them. Therefore choosing

to have one is going against the majority view. Despite CIs being manufactured for deaf people, they are not accepted as being Deaf, and so they are considered to be hearing. Indeed, they are firmly placed as instruments of oppression.

> *'In terms of cochlear implants, really in a sense you are rejecting your Deafness by having one. So really it is a conflict of time in one's Deaf identity if one has one' (Howard).*

However, there is a paradox. As Mark stated, CIs can be seen as the next stage in D/deaf people's connection to technology. Indeed, they are becoming difficult to avoid.

> *'If I have a cochlear implant, anybody who has a cochlear implant, or who is considering having a cochlear implant, it practically is a development of D/deaf people' (Mark).*

As I have already explained the route towards Deafness is often taken as a young adult, especially when born into a hearing family (see e.g. Ladd, 1991). In recent years, these potential new members may have had a CI chosen for them by their parents. However, as the CI programme in the UK has only been in operation for fourteen years and the optimal age for implanting is before speech acquisition, Deaf Community is only just encountering their presence. There was recognition therefore that more acceptance may be needed when these people wanted to participate in Deaf Community in the future, and that it may someday be possible to have a Deaf identity and a CI.

> *'Well, maybe their parents made that choice for them; it's not their fault. They may have to still have a very strong Deaf identity. I'm not saying it's the parents fault either, it could be the doctor's influence' (Julian).*

> *'So I mean they should be included I feel, umm but yes I mean it's difficult when somebody's older and they make that choice for themselves that's their choice, but when it's children?' (Stacey).*

Even so, when children with CIs become adults, and are able to make their own choice over continuing with the CI, acceptance by Deaf Community may become more problematic.

> *'In Britain it's not really a widespread thing as yet, it's too early to say and probably too complicated to answer as well. I mean some people may have a cochlear implant, but when they are older they may take them off they may remove it...But sure I think it would make life difficult for them to become accepted...' (Paul)*

Indeed, Rose, Vernon & Pool (1996) in a survey of USA children found that 47% were no longer using their CIs. This may be related to functional limitations, where like hearing aids they are removed once the prohibition of schooling is over. Alternatively, the social stigma encountered in Deaf Community may discourage their use. Certainly, the use of CIs, and to some extent hearing aids, are restricted in Deaf spaces.

Technologies and Deaf spaces

Spaces for people who are perceived as disabled are mediated by the binaries that position them as abnormal (Chouinard, 1999). For D/deaf people these limits to action operate on a number of levels. The inability to hear which in turn effects the capacity for oral language can be seen as the basis of spatial exclusion and may confine individual autonomy. At the same time, the inability to hear can be disregarded as a limitation, as exclusion is seen collectively on the grounds of being a linguistic minority. Within this view, Deaf Community assumes an added significance, becoming not only a shared space of belonging but also the foundation for being Deaf. Whilst aspects of community are 'imagined', they also invariably have a material basis that is spatialised. Despite (as chapter three revealed) the arduous genealogy of Deaf spaces, they have nonetheless managed to survive and have played a vital role in the maintenance of Deafness and BSL. hooks (1990), writing from a Black perspective, captures the sentiments surrounding Deaf spaces, such as Deaf schools and Deaf Clubs.

> 'We come to this space through suffering and pain, through struggle. We know struggle to be that which pleasures, delights, and fulfills desire. We are transformed, individually, collectively, as we make radical creative space which affirms and sustains our subjectivity, which gives us a new location from which to articulate our sense of the world' (hooks, 1990 p. 153).

Deaf Clubs

For adults, Deaf Clubs have long been the sites for the performance of Deaf identity. As Stevens (2001) highlights, they were vital as places in which D/deaf people could sign without censure.

> 'The Deaf identity is very much related or linked to the idea of Deaf clubs. In the past we had a period of time when we were not allowed to use sign language on the streets, where we were embarrassed to used sign language on the street. We were put down by the notion of oralism and this has had an effect on us. So in the past sign language was limited in where it was used, on the whole only in the Deaf clubs. They were the only places where you saw sign language, you did not see sign language on the streets in the theatre or on television. This is not that long ago - I am talking maybe 30 years ago' (Stevens, 2001 p. 2).

Whilst Deaf Club membership in the UK is perceived to be in decline (see e.g. Smith, 2001; Stevens, 2001) evidence from the Deaf People in the Community (DPIC) study (Dye, Kyle, Allsop, Denmark, Dury & Ladd, 2000), as shown in Table 6.1 on the next page, reveals that it is still an enduring feature of being D/deaf.

Table 6.1: Percentage of DPIC sample members of their local Deaf club by geographical region, in the UK

Region	Member of Local Deaf Club (%)
Greater London	57
South Western England	67
South Eastern England	50
Western England and South Wales	100
North Western England and North Wales	95
Eastern England	67
West Midlands	72
East Midlands	86
Northern England	75
Yorkshire and Humberside	95
Scotland	74
Northern Ireland	44
Total	74

Source: derived from Dye, Kyle, Allsop, Denmark, Dury & Ladd (2000) p. 43.

The D/deaf people in this study certainly felt that Deaf Clubs were important, especially for specific groups who may experience some isolation, such as elderly D/deaf people and young adults first venturing into Deaf Community (see also Valentine & Skelton, 2003).

> *'I mean I know the numbers of Deaf Clubs are really, really reducing, but I still feel there's a need there. For example, old people, how would they meet? And also mainstream schooling, and if a D/deaf person has no information from the mainstream school, how do they meet D/deaf people when leaving school, it's important that they go to a Deaf Club to get this. And also there's Social Services within a Deaf Club as well that can assist. And for a less confident D/deaf person, they need access to that' (Julian).*

Deaf Centres also played an important role in the 'politics of location', advertising the proximity and 'normality' of D/deaf people, whilst also promoting their difference.

> *'But I still believe that it's useful to have a Deaf Centre, because it's a way of showing Deaf Culture, it's you know, the issues that come up within the Deaf Club that are relevant to Deaf Culture. It's also an opportunity to give a presence of D/deaf people in the community for the wider community to be aware that the Deaf Community is this and also it's a good social arena' (Conrad).*

In addition, because BSL is the norm within them, Deaf Clubs or Centres were familiar places to relax in, away from the stresses of oral communication (see also Laborit, 1998).

> *'Yeah, because if you are in the hearing world every day, that is an environment the Deaf Centre, where you can really relax and information share, share news, because I think a lot of Deaf people miss out on a lot of news otherwise' (Ella).*

However, the familiarity of these places was also experienced as boring and so D/deaf people were beginning to spread out into the wider environment. This was driven by changes in society's awareness of D/deaf people and an increasing tolerance and understanding of BSL, which was especially true for young D/deaf people.

> *'So the Deaf Community is becoming more of a transient Community in the sense that they are not meeting in the one location, the Deaf Club any more. But they tend to have gatherings around the country, so people are travelling more to different locations, umm to have their various gatherings' (Conrad).*

'I think for younger people now they have more choice to go to different places, a far wider spectrum; and society's more Deaf aware now as well. Some people within that society can sign now as well, whereas obviously before very few hearing people could sign so. Young people can go to a pub or club whatever, garages whatever and you know they will meet other people, they can sign and so the immersion they are in is very different to as it was' (Howard).

Interestingly both Tom and Conrad suggested that Deaf Club participation could be reducing due to the rise of home entertainment technology.

'I think it's changed more now, more D/deaf people like to maybe stay at home cause they've got PlayStations, they can stay at home they don't need to go to the Deaf Club maybe, because they've got the equipment maybe at home, so maybe it's changed their lives' (Tom).

'One of the main reasons for the Deaf Community meeting together less is of course the improvement in technology by television. For example with use of subtitles and DVD, of course you have fantastic sub-title facilities there, so that is on the increase, people's use of DVDs at home' (Conrad).

Certainly, there were some fears that Deaf Clubs may close down, although this mainly appeared to be related to the poor facilities and location of the local Deaf Club, which was seen as being stuck in a time warp.

'I mean long time ago, I think the Deaf Club, I mean that was a place, I mean where people could go to. But I think, I think, people are more reliant on their own devices now and their own groups and I think in the future probably Deaf Clubs and Deaf Centres will probably close' (Kevin).

'I think the atmosphere in [name of Deaf Club] *makes me think 'no I don't want to go there again'. Whereas in* [another Deaf Club], *very nice mix, lovely mix, very friendly, very open, yeah' (Mike).*

'I suppose what they need is a Deaf Club in a good place, in a good location, you know in terms of [local Deaf club] *you know it's in terms of a ghost place, you know. I mean it's what 1950s or whatever it's like a dead place, you know, it's just the curtains, the environment, it's awful... but you know if it's in a new place, you know, fresh start, sports stuff, you know drama access things like that. If it was in a fresh location then great...' (Andrea)*

'I mean [name of Deaf Club] *itself, is pretty, it's going downhill really, I mean there are so many changes afoot and in the wider community, young people want to be more expressive. They want to find out new things, other clubs are brilliant they are moving with the times, but* [name of Deaf Club], *you know it needs a big change there...' (Stacey).*

The continuation of Deaf Community was stressed but somewhat relocated from specific Deaf spaces to a more general environment, such as a pub where the atmosphere was considered to be better.

'Deaf' pubs

In this study, D/deaf people were increasingly and collectively meeting in specific pubs, which were to some extent becoming Deaf spaces.

'The Deaf Club, the atmosphere, there's no atmosphere. Go to a pub, it's completely different, the atmosphere is there and you just you are immersed in it immediately, very different' (Mel).

'Completely different, I would prefer to go to a hearing pub, nice atmosphere, I mean I feel no different to me as a person going to a hearing pub. The Deaf Club, I mean if you have a party or a social event,

that's fine, but when I walk in often you think, I just, the atmosphere, there's just nothing there it's like a hospital, or classroom that sort of sterileness' (Stacey).

Whilst the existence of Deaf Clubs was definitely appreciated, the closeness of the Community was however sometimes seen as a limiting factor (see also Valentine & Skelton, 2003). Both Julian and Kevin for example, preferred to socialise in pubs, because they could be with a group of their friends rather than the whole of the local Deaf community.

'...when I go to the Deaf Club it's like a family environment, with children there, old people, a whole mixture there. And you have to be more responsible, you can't drink masses because it's a family environment and the atmosphere is really different. Everybody is Deaf, but there is still a variation there, a massive variation within that. I think in a mainstream pub the atmosphere is a bit better, I feel I can be mixing with friends who may be more of the same age and who have got more of a thing in common in that sense' (Julian).

'I mean in the Deaf Club you've got people of all different ages from young to OAPs, but in a pub usually it's aimed at young people, or it may have an OAP group, but they would be separate. They wouldn't be mixing together, and I think it's probably better that way. Because you know I mean they don't necessarily, I mean a lot of young people don't want to be in a situation where their parents are going to know what they are doing, and what they are up to, so I think it's better it's separate' (Kevin).

The presence of other D/deaf people was however a vital aspect of feeling comfortable in the pub environment.

'I would feel fairly kind of deflated, I think, on my own, yeah. Because I wouldn't be able to communicate, so I would be out of my depth. If I was with a Deaf group, that would be different, that would be grand. Yeah,

yeah, because then I would have my friends around me and that would be like, yeah, in a sense it might even be better than a Deaf Club, you know going with a group of Deaf friends, but to a pub' (Jim).

Local pubs were being used despite the lack of assistive facilities, but flashing fire alarms, safety equipment etc. would be welcomed in terms of equity.

'I mean there's a whole variety of things I expect. Yeah, flashing lights for the phone, alarms, you know the whole usual stuff' (Andrea).

'...yes they need to set up something and some kind of awareness as well, and maybe flashing light systems or maybe a Minicom or something. Because I mean they are taking the income of Deaf people, really they should be giving something back. And I think a lot of Deaf people are quite ignorant of this, that really those places should be aware and should be you know, providing the goods and I think Deaf people should be complaining and saying you are getting a profit from us, come on where's the return?' (Stacey).

'They could have a videophone in a hearing pub, a Minicom, last orders why not have a flashing light system? You know because I mean obviously, a bell, you are not going to hear it' (Steve).

However, there was some ambivalence over whether the introduction of particular devices would change the valued atmosphere of the environment. Lianne was worried about the intrusiveness and visibility of the technology, which she felt could make D/deaf people feel uncomfortable. Whilst Ella connected technology use to a work environment, and so the presence of devices in the pub would spoil her ability to relax.

'Twenty people are going to be at the pub who can't hear and you may want to have some sort of provision for fire, or the counter's closing. Of course, you want something that ensures that everybody has access to

that information together. On the other hand you don't want to stigmatise, that's just a fact, people don't like being stigmatised, and if you put in all these bells and whistles people want to feel normal, it's just a fact. So you have to make a fine balance between what you choose to do, but if it's a public facility, you need to do that' (Lianne).

Ella: *'No, I don't think you need it in a pub environment, there you want to just switch off and just drink'*
Ember: *'So are you more, relaxed, yeah, so are you more relaxed when there isn't all those equipment things?'*
Ella: *'That's right, yeah. Because to me it's work, work, work and I want to forget that in that environment'.*

As Kevin explained, whilst the presence of assistive devices may create an accessible environment they are not the main reason that a place becomes a Deaf space, as human interaction between D/deaf people is considered more important.

'But you wouldn't necessarily say that just because it's got the equipment that it feels like my place. I think it's to do with social things, and outlook, and stuff like that more than the technology' (Kevin).

These interactions are driven or at the very least facilitated through the use of BSL, which as we have already seen has a major role in the mediation of technological associations.

Technologies, Deaf Community, and BSL

'Stretched-out' communities utilise media communication to enable interaction at a distance (Silk, 1999). Even when communities are based in a neighbourhood, equipment such as the telephone plays a role in the creation and maintenance of group connections. Being without access to a phone is seen as being cut off from society. This can be seen as a sweeping statement, but prior to text and e-mail, if you told people they couldn't phone, they were often flummoxed by the logistics

required to contact you. Indeed, the telephone has always held an ironic place in Deaf history, because it was invented as a possible hearing device by A.G. Bell for his deaf wife and mother, but instead resulted in D/deaf people's exclusion (see e.g. Brueggemann, 2001). Denied access to telephones, Deaf Communities of course carried on with face-to-face meetings. However, the eventual development of the Minicom, and recently SMS and e-mail, has reduced the need for face-to-face relations, and as these technologies are based on written English and so shunt BSL aside, this threatens the continuation of Deaf Community (see also Emerton, Foster, & Royer, 1986). Being a minority language with a legacy of oppression against its use (see e.g. Lane 1984a; Sacks, 1991) BSL is however vigorously defended by Deaf Community (see e.g. FDP website)[77]. Moreover, in keeping with sentiments expressed by Anzaldua (1987), in relation to being Hispanic, there is a great deal of collective pride attached to BSL.

> 'So, if you want to really hurt me, talk badly about my language. Ethnic identity is twin skin to linguistic identity – I am my language. Until I can take pride in my language, I cannot take pride in myself' (Anzaldua, 1987 p. 59).

Indeed, over four thousand D/deaf people and their allies recently marched in London, 15th July 2003, in celebration of BSL recognition and to push for its legal status. As the FDP websites states (see footnote 78):

> 'With BSL we have a clear identity as normal Deaf people with different language and culture' (15/7/03).

Consequently, one of the questions I asked explored whether technology could be used in place of BSL in face-to-face conversations. Could a non-signing deaf or hearing person use a translation device when communicating with a D/deaf BSL user? And would this be accepted by Deaf Community?

In practise, only Steve agreed wholeheartedly with the possibility of using machines to mediate communication.

> *'I mean say when I was working in an office you could use the computer to talk to somebody if needs be, yeah' (Steve).*

[77] http://www.fdp.org.uk

Ella thought it would feel strange, but could possibly be useful in an emergency situation.

> *'They could use SMS – it would be quite funny though...I think you would be better doing away with it and that it was out of the equation, I mean but if it was an awful situation a real crisis, you would have to do something' (Ella).*

Overall though, the D/deaf people in this study, felt disconnected by technology, and a mechanical presence was perceived as interfering with the naturalness of human dynamics, which could adversely affect Deaf Community.

> *'I think that maybe there are occasions in which technology may actually interfere, because it would take more time, more processing to 'OK how do I get this to go through'. And you try and understand that when you can just bypass and try to juggle. When somebody is speaking French and somebody is speaking Spanish you come up with a Creole, a pidgin too. It's a spontaneous human connection there, but you put in technology and it interferes with the human dynamic of it' (Lianne).*

Mike believed that any device would soon be bypassed, as human connections would soon take over. Whereas both Howard and Mel stressed the communication abilities of D/deaf people, who are generally good at generating some sort of rapport as they constantly grapple with the creation of understanding and so would not need a machine that could destroy this adaptability.

> *'Well, you would just communicate, I mean, in terms of, with your hands, and if you were actually looking at a technological device, you would say do you know how you can help me make this work and you would talk to each other' (Mike).*

'I mean if you talk about communication, it should be interactive no? It's like using a third thing in the equation. It doesn't feel. I would prefer people to have an adaptation within them. They could communicate in that way by adapting by something within them. You find it in D/deafness, I mean a hearing person can't sign, right, you find a way through to talk to each other you find a way. If you use technology, you are kind of cutting off that rapport, yeah' (Howard).

'I think I'd want to put the equipment aside. I think D/deaf people can adjust when they meet somebody face to face. They can match the skills of that person and adjust their communication' (Mel).

Because technology has constantly been used against Deaf Community, it lacks neutrality. Machines are never just machines. They are also rhizomatically part of networks of both oppression and resistance. Thus, as Paul explained, a translation device may serve as a connection between two people, but it would also reveal the polarity between them and this could have psychological implications. So, the emotions, historicity, and identification that D/deaf people and Deaf Community attached to the technology would affect the process of its use (see also Gleeson, 1999b).

'My mind is a bit blown by that actually, I mean that process of communication between Deaf and deaf psychologically, I mean it would have a deeply psychological impact on the process. Because one person might be denying their identity, and that the other person might be representing almost the other evil, see what I mean? So, it's a difficult subject for me, you know personally to respond on in a way, because of the other psychological factors. I mean if you think about oral and mainstream methods increasing, I could see there may be a need for what you are talking about to create a bridge between those two people' (Paul).

Expanding on the congruity between Deaf identity and technological attachments, the further exchange with Paul revealed an interesting notion of D/deafness when he equated machines with masculinity.

> Ember : *'So from what you are saying, am I right in thinking that you think the technology gets in the way of the Deaf identity?'*
> Paul: *'Again it's interesting, I think it would create a tension, a tension definitely in the relationship there. I mean if you think about Deaf identify it's quite a female thing to me and a green thing, female yeah and green, and technology is very male so there is a tension there anyway I feel, I mean in some way technology could strengthen us and in other ways it could threaten us. I mean at the moment I don't want to go on any further and beyond say any more but I would like to say there is a tension within that. Psychic, I'm trying to think, get the spelling right, they are almost psychically opposite so there is a tension there'.*

Due to oralism and the co-option of technology to carry out the aims of making D/deaf people into oral hearing people, or at least as 'normal' as possible, so machines may be inscribed with masculine notions such as domination and control. D/deafness and Deaf Community on the other hand can be mapped onto a feminine polarity that constantly struggles against being classified as the inferior 'other'. Translation devices may be problematic because they add a seemingly abnormal component in to 'normal' human behaviour; they disrupt the naturalness of BSL communication. Thus, equipment that does not interrupt BSL may be more acceptable. Certainly, Paul believed that videophones developed from a D/deaf perspective were compatible with a D/deaf identity, and were useful tools for furthering Deaf Community.

> *'We fought to set up the videophones for young Deaf children, yeah. And that is far out, because maybe they come home from school, they are at a loss at what to do, they can't communicate with neighbours, can't communicate with family, but suddenly they've got a videophone and they've got that linkage through, you know. So I just wanted to add that is*

really special, you know, and for older people as well again, in terms of their loneliness and isolation, so technology is moving now towards encompassing sign language. Or maybe sign language is moving towards being encompassed within technology...' (Paul).

Subsequently, as technology continues to incorporate capacities for visual transmission and thus as BSL and D/deaf people are increasingly included in the design and implementation of these devices, so the inscription of machines can be changed. Instead of emphasising the perceived binary between hearing and D/deafness, they can then be used by Deaf Community as linkages that may cut across difference.

Summary

Definitions of community stress the notion of belonging, which may stem from a geographical basis, or occur through material conditions that include a common language. Whilst community is perceived as a bordered concept, it can also contain fragmentary and heterogeneous identities. Deaf Community is certainly both spread out and concentrated in particular areas yet a sense of connection to other D/deaf people prevails. In the UK, local Deaf Communities are primarily based around Deaf Centres and/or Clubs. These places provide a locality for the expression of D/deaf identity; they contain some kinship ties, but are mainly created through social participation, emotional attachment and the use of BSL. Thus, D/deafness is fundamentally an individual and collective experience and technological associations need therefore to be viewed in relation to both being D/deaf and being part of Deaf Community.

As the empirical data in this chapter revealed, D/deafness is seen as a shared experience, where D/deaf people are linked together through their use of sign, but also due to a range of discriminatory practices based on their inability to hear. However, being D/deaf and part of Deaf Community is not an automatic identity that is conferred by deafness. Far from being homogeneous, D/deafness contains different ethnicities, interest groups, and also to some extent hearing people (with D/deaf parents). D/deaf people born into D/deaf families do have a

fairly seamless entry into Deaf Community, although this can be locally based. Whilst D/deaf people from hearing families have to both join and be accepted, this is not always an easy process. The main criterion of acceptance is the performance of a D/deaf attitude, which stresses visual orientation and resistance to labels of abnormality.

These expressions of D/deafness are mediated through various technologies, which are often based on a normalisation paradigm that aims towards 'enabling' D/deaf people to hear. As such, they can work against Deaf Community. Hearing aids are part of rhizomatic pathways and embodied connections. How D/deaf people feel about them and how they are politically positioned is a crucial component of their employment. Hearing aids negotiate binaries and so break down oppositions between them. CIs however, are unable to bridge the division between Deafness and hearingness. Their use, especially in D/deaf children, is opposed and they are placed outside Deaf Community, because they run counter to the notions of Deaf pride. However, as implantation of D/deaf children continues, this position may change in the future, although it is difficult to imagine CIs ever being truly accepted as legitimate parts of Deaf Community.

Deaf spaces have played an important role in the creation and maintenance of Deaf Community and being a member of a local Deaf Club remains a feature of being D/deaf. However, Deaf Community in this study was also spreading out into other social environments like pubs. Engagements with technologies were therefore reducing as these spaces lacked assistive devices. Whilst the presence of various specific devices would be appreciated in terms of access and health and safety issues, there was also some antipathy towards their introduction. This related to the possible stigmatisation of D/deaf people through the visibility of 'different' technologies and to the mechanical disruption of the environment, where the ability to relax would be destroyed by the incorporation of artefacts related to work. Similarly, technological connections in relation to BSL were also rejected. Here, machines were seen as interfering with the 'naturalness' of human interaction. D/deaf people did not need translation devices because their ability to connect would be hampered by a mechanical presence. Because of a

legacy of past oppressions that have been technologically based, machines were seen as being against Deaf Community. However, there were some exceptions. In particular, videophones, that allow the transmission of BSL, were seen to be helping D/deaf people, especially the young and the old, experience a sense of belonging and connection. Future technologies that embrace a D/deaf attitude may therefore become part of Deaf Community.

The next chapter, presenting the findings from e-mail questionnaires, continues to explore D/deaf people's technological association through an examination of the perceptions and feelings of D/deaf Internet users and site owners.

Chapter Seven: D/deaf Cyberspace

Cyberspace, being mediated by machines, blurs the traditional relationships between nature and culture, and is a pertinent area for examining the interactions of humans and machines. This chapter begins by highlighting the fluidity of cyberspace, and the debates surrounding both virtual community and virtual corporeality. Moving to specific experiences of being technologically connected, the chapter then concentrates on the geographies of D/deaf cyberspace, and explores the current layout of D/deaf websites. Through the presentation of the empirical findings gained via e-mail responses, from both D/deaf Internet users and D/deaf website owners, the lived practices of being on-line are then examined. This focuses on five key areas: The first section highlights D/deaf people's connections to D/deaf websites, and the value placed upon these interactions. The second section reveals the formation and display of being D/deaf in cyberspace. The third section looks at the creation of D/deaf virtual spaces, and the experiences of collective identities in relation to Deaf Culture and Community. The fourth section focuses on the tension between using text and the lack of BSL transmission. The fifth section explores the implications of the simultaneous connection through a machine but lack of face-to-face human meetings.

Cyberspace as fluid space

Benedikt (1991) has defined cyberspace as:

> '...a globally networked, computer-sustained, computer-accessed, and computer-generated, multidimensional, artificial, or "virtual" reality' (p. 122)

Yet, cyberspace remains a nebulous concept that is difficult to grasp hold of. Certainly, it is something that occurs within a computer, but it is also both out there, as an exchange of global information (Castells, 1996), and in here, as present in the screen (Turkle, 1997). Whether located in the void of telecommunications or in the box of the machine, cyberspace is neither inside or outside, it is instead both, and elsewhere. That is what makes it difficult to

represent, because representation is so much easier when you can simplify, especially if you can make something fit into a dichotomy. Then it is either black or white, this or that, real or unreal, whereas cyberspace is slippery being simultaneously a combination of the real and the virtual, so that the real is part of the virtual and the virtual is part of the real, not a dialectical exchange, but rather a recreation, recombination, and restructure (Ward, 1999). In practice, relationships in virtual space or real space are experienced as the same way; indeed, cyberspace is viewed as another place to meet (Parks, 1996; Parks & Roberts, 1998; Valentine & Holloway, 2002). However, cyberspace is an and/both concept, where even though parts of it are mappable (e.g. Dodge & Kitchin, 2001), it is not fixed. Information is not stable, but rather is broken down and reconstituted. Time is also reworked and often asynchronous, requiring memory from both the machine and the user. Cyberspace is thus mutable, a manifestation of Deleuze & Guattari's (1988) rhizomatic network. It can be a space of numerous places. The best way to understand cyberspace therefore is to go with the flow.

However, despite the obvious fluidity of cyberspace, it is still often seen in dualist terms, as either something radical and welcomed for enhancing the capabilities of democracy and connection, or feared as a destroyer of the certainties of social life and individual freedom. The Internet's military source tends to feed negative attributions, which are also focused on surveillance potentialities and capitalist expansion (e.g. Davis, 1992; CAE, 1995; Porter, 2000). The positive views are fostered by the notion of 'unprecedented possibilities' (e.g. Wood & Smith, 2001) that seemingly extend beyond state or institutional control. Within feminism for example, cyberspace has on the one hand been criticised for being part of a patriarchical system that will continue to perpetuate gender stereotypes (e.g. Squires, 2000), and on the other it has been heralded as a space of liberation that opens up new ways of being (e.g. Spender, 1995). These responses to technological change are linked in part through the significance placed upon the use of machines, especially the consequences that a machine/human union may have on the sovereignty and 'naturalness' of the individual. In the utopian view,

machines are the progressive cultural future that will eventually become part of the definition of 'the natural'. In the fear view, machines and technologies are unnatural cultural impositions that are disrupting 'the natural' order and the customary space of bodies (for which read specific bodies, i.e. not disabled bodies). Popular films have been exploring these tensions for some years. In *Robocop I & II* for example, the male star originally compromised and indeed violated by being made mechanical was in the end able to transcend his programming through asserting his humanity. This enabled him to combat the lawlessness that had descended upon society. The film played with the scenarios of machines being used to take over humans (culture subverts nature), and humans being able to adapt by appropriating machines and enhancing biological capacities (nature reasserts culture). What these films make clear is that technological developments cannot be viewed separately from society. As Bijker & Law (1994) have pointed out 'we get the technologies we deserve', and rather than being apart from society,

> 'Technology is never purely technological: it is also social. The social is never purely social: it is also technological. This is something easy to say but difficult to work with. So much of our language and so many of our practices reflect a determined, culturally engrained propensity to treat the two as if they were quite separate from one another' (Law & Bijker, 1994 p. 305-306).

The Net is a mesh of transmutations between human flesh and inhuman machinery. In cyberspace we are connected, not just to each other, but also to the layout of the keyboard, and the shape of the mouse. Yet, at the same time, and this is where it becomes a 'difficult thing to work with' they are also separated; the keyboard gets left behind when the human leaves the computer.

Recognising this simultaneity of connection and disconnection is important for an understanding of difference. Seeing cyberspace in this way is similar to the reconceptualisation of place proposed by Doreen Massey throughout the 1990s. Beginning with the notion of a 'global sense of place' (Massey, 1991), where social interactions at all scales affected the construction of the local and vice

versa, Massey (1992) then worked towards a reconfiguration of place that incorporated not just the relations and processes that produced and maintained places, but also the participation and practices of being *in* particular places. Subsequently, whilst consistently deconstructing dualities, she suggested that place could be conceived as an instance in networks of social relations, where

> 'The identities of places are always unfixed, contested and multiple. And the particularity of any place is, in these terms, constructed not by placing boundaries around it and defining its identity through counterposition to the other which lies beyond, but precisely (in part) through the specificity of the mix of links and interconnections to that 'beyond'. Places viewed in this way are open and porous' (Massey, 1994 p. 5).

Not only does this notion of place move away from an essentialist concept bound perpetually to a binary logic, it also breaks the link to nostalgia and the seemingly fixed aspects of places that have led to nationalism and subsequent xenophobia. Continuing to explore the implications of multiplicity, Massey (1999) suggested the insertion of politics in both space and place to articulate difference without recourse to exclusion. Politicising the spatial in this way not only includes power relations, it also reverberates with the formulation of mutable identities, which again challenges dichotomous tradition. If we apply this conceptualisation of place as porous, part of various networks where numerous identities can be performed, then we have something that sounds exactly like cyberspace. Internet users can experience a 'global sense of place' when they 'visit' websites. And, places on the Net are defined and reached via hyper-links, that is '...through the specificity of the mix of links and interconnections...'. Thus, cyberspace is a fluid space, where nature, culture, and technology are allied in complex associations that are permeable (Bingham, 1996, 1999). Yet, considerations of virtual reality continue to be bounded or dualist as, despite being a new space, old assertions are mapped on to it. This can be illustrated by considering the arguments over whether groups in cyberspace constitute a community or not, and whether individuals who enter this space are becoming disembodied.

Community in cyberspace

A community is mainly defined through its spatial organisation, as a space where people gather to engage in social relations. At the same time, as Williams (1983) points out, community is defined through its positive association where

> 'Community can be the warmly persuasive word to describe an existing set of relationships, or the warmly persuasive word to describe an alternative set of relationships. What is most important, perhaps, is that unlike all other terms of social organization (state, nation, society, etc.) it seems never to be used unfavourably, and never to be given any positive opposing or distinguishing term' (p. 76).

Whether a group or interaction is part of a community or not therefore matters, because if it is not considered to be a community then it is something less favourable, and without the same value. Cyberspace challenges traditional understandings of space by extending reach whilst containing movement. Thus, the existence of community within it has been questioned. For Rheingold (1994, 2000), interaction in cyberspace, in particular through Internet chatgroups, does constitute a community, which he has labelled a 'virtual community'. Seeing little difference between real and virtual communities, Rheingold applauds the relationship creating capacities of cyberspace, especially as he feels that traditional forms of association are in decline. Chatgroups in his experience fulfil the same function as face-to-face friendships, and provide the same level of support, as belonging is about participation and belief in the group as a close-knit and caring association. Self-help groups, for example websites and chatgroups for 'problem drinkers', have been shown to provide a supportive environment (Pleace, Burrows, Loader, Muncer & Nettleton, 2000; Muncer, Burrows, Pleace, Loader & Nettleton, 2000). Likewise, marginalised groups, such as lesbians, can utilise chatgroups as supportive places where they can '...gather for recreation, for advice, and to "be around one's own kind"' (Correll, 1995 p. 286). Thus, advertising the presence of lesbians, whilst also legitimising and normalising their sexuality (Burke, 2000). In a similar vein, Negroponte (1995) argues that cyberspace connections will lead to a new 'social fabric', where community can be

global and thus physical space is made irrelevant. Whether or not cyberspace destroys the materiality of place, and I don't believe that it does, positive accounts of cyberspace stress that human interaction and community engagement is facilitated through the connective capabilities of computers. However, whilst not completely bounded, as potentially anyone can join, it is clear that these virtual communities are about being part of something that is enclosed. As such, they refute the notion of cyberspace as fluid. Conversely, McLaughlin, Osbourne, & Smith (1995) deny the presence of communities in cyberspace believing instead that exchanges on the Internet are superficial and thus constitute at best 'pseudo-communities' (see also Heim, 1992). In other words, they are too fluid to fit into the traditionally bounded conceptualisation of community. Continuing in this vein, for Wilbur (1997):

> 'Virtual community is the illusion of community where there are no real people and no real communication. It is a term used by idealised technophiles who fail to understand that authentic community cannot be engendered through technological means' (p. 14).

I find this statement somewhat astonishing. Who are these 'unreal' people e-mailing me everyday, and given that I understand what they are writing, in what way are they not communicating with me? (See also e.g. Thomsen, Straubhaar & Bolyard, 1998). Furthermore, as we have discovered in the previous chapter, technology can sometimes be used to facilitate community relations, although fears of authenticity do continue to reverberate due to the perceived unnaturalness of mechanical devices, nevertheless, technology itself does not have to be a barrier to intimacy. In agreement with Rheingold, although in a less bounded way, chatgroups and websites do have the potential to foster community involvement and feelings of belonging to a group (e.g. Franzen, 2000). The difficulty in seeing cyber communities as real stems from the propensity to use existing metaphors and spatial language to describe new happenings (Light, 1996), whilst virtual technologies are not I believe pathways to utopia, they are a continuation of what we already are. Real places continue to bear upon cyberspace (Thrift, 1996a; Graham, 1998; Escobar, 1999; Walmsley, 2000) and it is therefore not surprising that existing spatial metaphors are utilised. Rather the problem lies in trying to

define the absolute truth instead of leaving metaphors open and subject to interpretation, which after all is their function. Cyberspace is a network combination of technologies and heterogeneous relations that are constantly changing; its definition therefore should by necessity be fluid (see also Crang, 2000). Cyber communities will reflect this composition and are therefore likely to be relational and mutable also. Technologies facilitate these relationships. Furthermore, following Baym's (1998) suggestion, online groups can be considered to be communities if the people involved believe them to be so, this is of course a return to Anderson's (1983) notion of 'imagined communities'. Communities in cyberspace do not 'escape' from actual places nor are they removed from real people. All communities in any geographical space, not just cyberspace, combine existent reality with virtual reality. In cyberspace, it is the connection to machines, but also the emotional attachments that people form, that creates community.

Corporeality in cyberspace

This mutable viewpoint can also be applied to the issue of embodiment in cyberspace. Popular conceptions of cyberspace expand on the potentiality to escape bodily confines (e. g. Gibson, 1986). Entering virtual reality is seen as akin to leaving the earth and becoming weightless, where individual minds can freely connect with the like-minded on a global scale. The 'meat', that is the flesh, has been discarded as an individual's body conjoins with technology. This idea is a continuation of the notion of the rational mind being able to flee the irrational body (Horner, 2001). Yet, we do not leave ourselves behind because our bodies cannot be separated from our minds. Merleau-Ponty (1962) long ago highlighted the mutability of these interactions by stressing the importance of lived experience. Providing a link between space and bodies, he argued that bodies are integrally linked to existence and hence are a component of spatiality because an understanding of space occurs only through corporeality.

> 'Far from my body's being for me no more than a fragment of space, there would be no space at all for me if I had no body' (Merleau-Ponty, 1962 p. 102).

As we are unable to divorce ourselves from our surroundings, so our bodies are part of the world (see also Burkitt, 1999). In other words, we have to be somewhere in order to be anywhere at all. For Merleau-Ponty, the occupation of a space was also not a fixed occurrence but rather a constantly changing phenomenon. Instead of situating ourselves in space or time, he believed that we are in effect the source of them.

> 'I am not in space and time, nor do I conceive space and time; I belong to them, my body combines with them and includes them. The scope of this inclusion is the measure of that of my existence; but in any case it can never be all-embracing. The space and time which I inhabit are always in their different ways indeterminate horizons which contain other points of view' (Merleau-Ponty, 1962 p. 140).

Being a temporal and spatial source provides infinite locations, we can be as we are right here and we can be as we were over there. Moreover, adding the position of others in relation to ourselves further complicates whether I am here or there, or you are. Including the body in this way, Merleau-Ponty not only disrupted the notion of a universal viewpoint he also exposed the fallacy of binary thinking by showing that our perceptions stem from both the mind and the body. Hence, the Cartesian cogito is a simplification. Neither object nor subject:

> 'We are involved in the world and we do not succeed in extricating ourselves from it in order to achieve consciousness of the world. If we did we should see that the quality is never experienced immediately, and that all consciousness is consciousness of something' (Merleau-Ponty, 1962 p. 5).

The 'mind' and the 'body' are interrelated, they cannot each exist without the other and so our experiences cannot be separated out into different corporeal or mental components. Everything we experience is experienced through the body. Hence revealing that we don't just dwell in places with our bodies, they are also themselves places in which we live (Casey, 1998). Thus whilst we may travel

'elsewhere' in cyberspace, nevertheless bodies are constantly part of the experience (Stone, 1991). Becoming is not only about thinking it is also about being a solid presence. In cyberspace, our bodies are not appendages that we return to once we log off, as we remain material throughout (Hayles, 1996). Our bodies don't disappear, because 'even when we are 'there', we are also inescapably 'here'' (Green, 1997 p. 76 footnote 9). However, we do in a sense go somewhere else on the Net, as it is possible to connect without being completely present in the flesh. Here again is a dualism occurring simultaneously. Argyle & Shields (1996) articulate the argument,

> 'If we believe that the body must be present in a physical sense to be a factor amongst individuals, that there is a separation, and that we can communicate from one level without other levels being present, then it will be very difficult to find physicality on a computer net. The body is not there. The screen, keyboards and monitor are physically in contact with the user, with the flesh up against barrier after barrier.' (p. 68).

But this view of the body is a bounded one, where the limits of the flesh are taken to be the edge of physical existence; it is the body without the mind. If we get rid of the dualism and see the mind and the body as together then as Argyle & Shields (1996) remind us we can reach another conclusion

> 'But if we argue for a multiplicity, multiple layers of being, a way to be in the body at all times, to express the whole of the person so there can be no separations, and we view the human as an extremely creative entity wishing to touch its fellows, then how can we eliminate the physical at all?' (ibid.).

Through this insistence of embodiment, nature is also reworked into culture. The essential notion of the body is culturally inscribed and at the same time, society is embodied. A multiple or partial perspective recognises that by 'body' we really mean bodies (e.g. Brook, 1999) and furthermore that the technological is part of this configuration. This isn't new; our bodies have always traversed multiple spaces (Kirby, 1997). Bodies are both discursive and material (Balsamo, 1996). This is clearly apparent in cyberspace, where being exists in text that can only occur through a machine. Yet, the notion of disembodiment remains a dominant

perspective of cyberspace, and dreams of transcendence are firmly rooted in progression from the volatility of the corporeal.

Cyberspace and disability

This notion of purity has been criticised for being essentially masculine (Brook, 1999). It is also rooted in the distinction between 'normal' and 'abnormal' bodies. Whilst the notion of becoming part of cyberspace is clearly difficult to fit within the dominant conceptualisation of 'nature' nevertheless the idea behind this association is to enhance the 'natural' capabilities of particular bodies. Things like pain or discomfort are erased. To be truly disembodied therefore denies the reality of difference. Disabled people are marginalised in this view of cyberspace. Their particular impairments are rendered invisible in the race to surpass bodily confines. Disability can be included but only as a stepping-stone towards an enhanced state. Cyberspace is expected to compensate for disability. And yes, the individual is now co-joined with a machine and therefore no longer natural, but is still expected to conform to a body that was premised on a normative notion of humanity. Clearly disabled people can transcend their corporeality by entering cyberspace, and this may be a welcomed and liberating aspect of being on-line (see e.g. Bowker & Tuffin, 2002). However, when cyberspace is viewed as disembodied, then disabled bodies are not included *with* their impairments they are included *despite* them. Becoming alike does not challenge the dominance of ableism. Moreover, political action based on a disabled identity can be undermined (Cromby & Standen, 1999). A disabled perspective that is grounded in the materiality of living with impairment shows the fallacy of this disembodied cyberspace. As Sobchack (1995) reminds us,

> '...there is nothing like a little pain to bring us back to our sense, nothing like a real (not imagined) mark or wound to counter the romanticism and fantasies of techno-sexual transcendence that characterize so much of the current discourse on the techno-body that is thought to occupy the cyberspaces of postmodernity' (p. 207).

In practice, as ANT has made clear, technology can be used in a variety of ways with varying effects (e.g. Law, 1994). Also, the fluidity of cyberspace ensures that difference is always present. Thus, by focusing on a 'disability' in cyberspace, the corporeal can be spatially reinserted and a disembodied presence refuted (see e.g. Parr, 2002).

A disabled perspective also challenges the view that true community does not exist in cyberspace. For many disabled people lack of mobility and access restricts their capacity for traditional community involvement. As such, finding a different way to associate is a recognisable experience and not particularly novel for anyone with impairments. Deaf Culture for example, is geographically dispersed and the promotion of Deaf politics is carried out at a distance, through magazines, newsletters etc. Utilising cyberspace is therefore a continuation, different because of its potential rather than its capacities. Cyberspace through self-help groups can be used to challenge the dominance of the medical model (e.g. Hardey, 1999). Disability communities are quite able to transpose themselves onto this new space and use it to promote awareness and involvement (e.g. Nettleton, Pleace, Burrows, Muncer & Loader, 2002). At the same time, for many disabled people connecting to others may be facilitated through technology. Thus communicating via a computer does not always have the feeling of artificiality attached to it. Disabled people and D/deaf people often use a combination of methods to be part of a community.

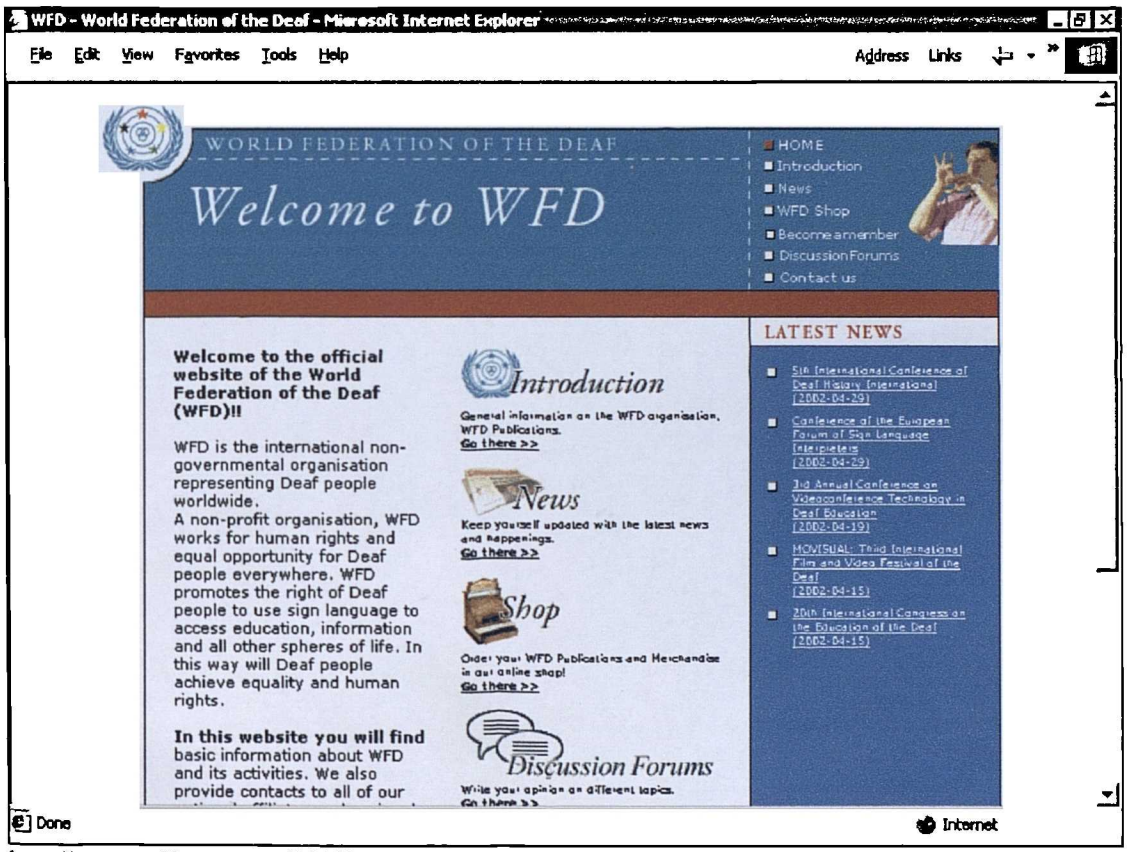
D/deaf websites

Because cyberspace essentially acts as storage it can serve as a 'repository for collective cultural memory' (Fernback 1997 p. 37), which can be important for a non-literate culture. For many D/deaf people cyberspace is increasingly being used as a medium for communication and community engagement and a growing number of websites set up by D/deaf people are becoming part of the cultural construction of Deafness. To provide a snapshot of D/deaf geographies in cyberspace I have concentrated on homepages from the main charitable

organisations and ones specifically aimed at the creation and continuation of Deaf Community. By looking at examples of these websites, we can see how the technology of the Internet is being used to combine both a natural and social understanding of being D/deaf[78].

Beginning with an international organisation, the World Federation of the Deaf (WFD), which was established in Rome in 1951 and represents 'approximately 70 million people' in '120 countries', Figure 7.1 shows the WFD website, set up by Carol-Lee Aquline, in February 2000.

Figure 7.1: World Federation of the Deaf (WFD) homepage



http://www.wfdnews.org (2002)

There are two main focuses here: on the left, in white, is an explanation of what the WFD is hoping to promote, namely human rights, education, and sign language, on the right, in blue, are links to various items of news concerning

[78] See also Miller (2000) for a similar exploration of Trinidadian websites.

D/deaf people around the world. This site promotes the notion of an international Deaf Community. It is both a political statement that highlights the discrimination D/deaf people receive globally and also a provider of information to combat lack of access. It employs the capital D when referring to Deaf people and is therefore situated as a cultural site. It is designed to be a Deaf space. Visually however, despite the WFD's commitment to sign there is a lot of written information and so the site is very English orientated. Although a signer does appear in the top right hand corner providing a tiny glimpse of sign language there is nevertheless little iconic use. The function of the site is to provide global links so that Deaf organisation's can connect with each other across space. There is an unstated assumption that D/deafness provides a bond across different geographical cultures, as such, the notion of both a natural and a social understanding of being D/deaf is contained within this site.

At the national level, there are three main charitable organisations' for D/deaf people in the UK each of which have their own websites. The Royal Association for Deaf people (RAD), established in 1841 in London[79], was and continues to be a religious (Anglican) organisation concerned with welfare and employment for D/deaf people. Throughout its long history, the RAD has always supported and promoted sign language, and indeed challenged the wisdom of the 1880 Milan resolution. Pictorial representations of sign language are therefore a prominent feature of its website. As can be seen in Figure 7.2, on the next page, where the letters RAD are both written and finger spelt.

[79] Originally the Royal Association in aid of the Deaf and Dumb.

Figure 7.2: Royal Association for Deaf people (RAD) homepage

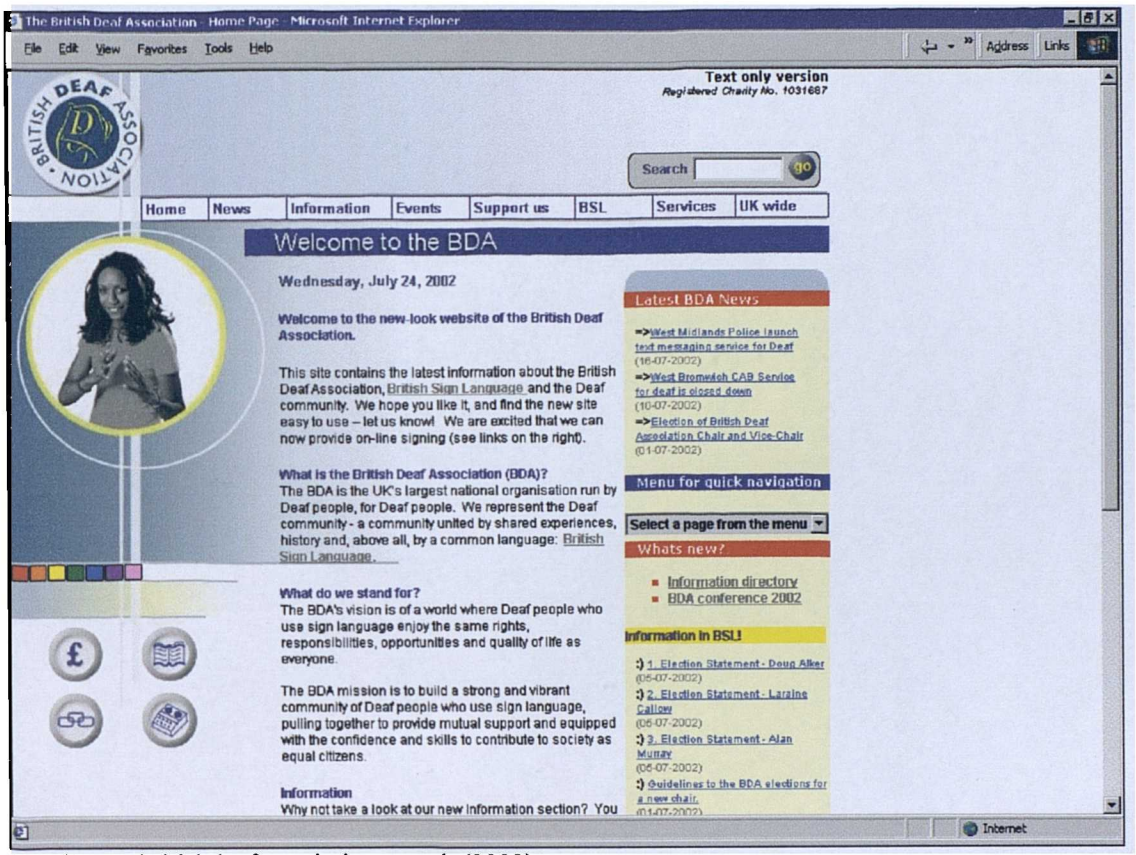
http://www.royaldeaf.org.uk (2002)

The page, in the middle white area, continues down to include links on how to find, or get factsheets on, interpreters, employment, and learn to sign information. On the left, in the blue area, are numerous pages that explain the purpose of the RAD and the history of some of its accomplishments. The site is aimed at the promotion of Deaf Culture and sign language and functions as a service directory for UK Deaf Community by fostering social connections.

The British Deaf Association (BDA), on its website, shown in Figure 7.3 on the next page, has consolidated its proactive stance on sign language by taking advantage of the latest technology and includes links to video clips of actual signing taking place, thereby providing signing access to its financial statements and making sure that its members feel part of their own organisation. There is a deliberate inclusion of written English, signing, and iconic pointers that reflect the range of communication used by D/deaf people. A human presence is quite

prominent and ringed twice to bring attention to the presence of the woman poised to begin signing, who being Black also highlights the modern BDA's[80] belief in multiculturalism and inclusion of diverse D/deaf experiences. There is also an update of news items concerning D/deaf people, given on the right under the first orange band, which highlights the notion of community and the connections that D/deaf people have with each other.

Figure 7.3: The British Deaf Association (BDA) homepage



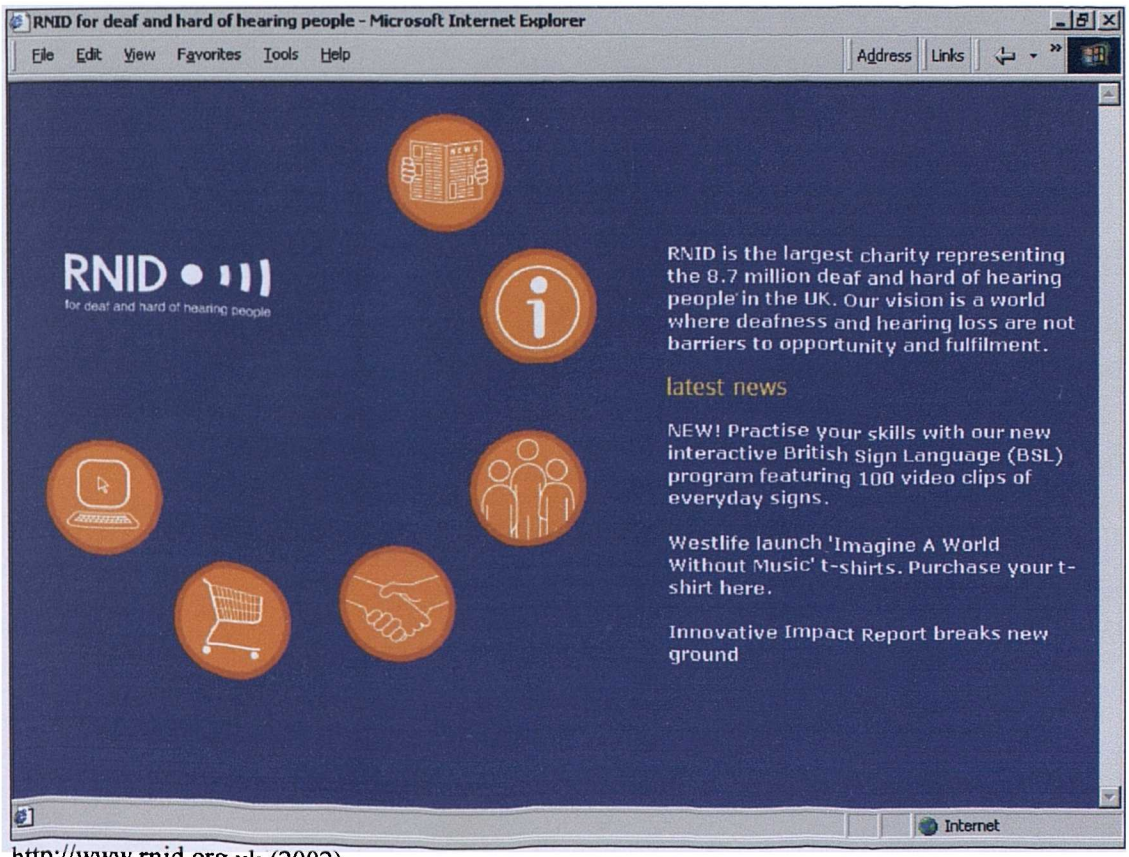
http://www.britishdeafassociation.org.uk (2002)

The main function of this site is to publicise the BDA and to stress the importance of BSL for British Deaf Community. Political motivation can be seen in the way the BDA stresses that its organisation is 'run by Deaf people for Deaf people'. The site is promoting a notion of Deaf consciousness that is rooted in the use of sign language and a shared history of D/deafness. Here the combination of

[80] After some members attempted to ban lesbian and gay D/deaf people from the BDA in 1987 a resolution was passed stating that 'The BDA is totally opposed to sexism and racism in all their forms and to discrimination against disabled people, lesbian and gays' (BDN, 1987 p. 1).

technology, nature and culture can be clearly seen. D/deafness as a natural way of being for some people has become a cultural experience that can be shared through a computer screen. Recently, (June 2003) the BDA have also launched a new online membership scheme called SIGN *Together*, which again promotes BSL and Deaf Community. In addition, on each day of the 'BDA Learn to Sign Week' (13th-19th October, 2003), over 45,000 e-mails encouraging people to learn BSL were sent out[81].

Figure 7.4: The Royal National Institute for Deaf people (RNID) homepage



http://www.rnid.org.uk (2002)

The Royal National Institute for Deaf people (RNID) website, shown in Figure 7.4, is interesting because this organisation is often seen as being anti-cultural Deafness, more concerned with finding a cure than the promotion of sign language and inclusion of D/deaf people, even within its own organisation (se e.g. Alker, 2000).

[81] Each e-mail contained a forty-five second signed video clip giving facts about D/deaf people's lives and

Yet, the homepage on the RNID website has the least written English and uses icons more than any other organisation. However, in using the lower case 'd' for deafness and including hard-of-hearing people in the logo on the left, the RNID is clearly not aimed at the promotion of Deaf Culture per se. In trying to represent all forms of D/deafness (i.e. including hard-of-hearing, deafened and D/deaf people) the RNID sometimes dilutes its focus and this is reflected on its website. Indeed contradictory messages are given in the white lettering on the right. Under latest news, the RNID publicises the importance of BSL and thus gives a positive image of D/deafness, but then counters this with the next piece of news about its latest campaign 'imagine a world without music', which gives a negative picture of D/deafness.

As Padden & Humphries (1988) made clear, the metaphor of silence that accompanies deafness in mainstream discourse is not a true picture of what sound may mean to many Deaf people, who often appreciate bass tones, or the feeling of the vibrations made by the sound waves. Similarly, as they pointed out music is conventionally connected to sound, but could just as easily be associated with the rhythm of the world.

> 'The eye music of the telephone wires
> with the music sheets
> with the lines that rise and quiver,
> sway and lower
> along with the passing of space and time...'

(Extract from Eye Music by Ella Lentz quoted in Padden & Humphries 1988 p. 107).

The RNID website is thus on the periphery of Deaf Culture. The interface between humans and machines is still a combination of the social, technology and nature, but here human nature is premised upon a normal/abnormal distinction.

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a new sign to learn.

Radical organisations with a specific agenda for political action also have homepages on the Net. The main one is the very visual website of the Federation of Deaf People (FDP) illustrated in Figure 7.5. Reflecting the central importance of BSL to the FDP, this website has an active signing component with the hands on the right, underneath the yellow letters 'FDP', opening and linking together to form the sign <FRIENDSHIP>. Furthermore, the word sign is written seven times in the central box area and serves to publicise the aim of sign language recognition 'for ALL'. The drop down menu, in yellow on the left, provides information about the FDP's manifesto, which firmly situates D/deaf people as a language minority rather than a disabled group. D/deafness, especially the use of sign, is seen as a natural way of being for people who are born deaf. Cyberspace for the FDP is a tool that furthers the voice[82] of D/deaf people.

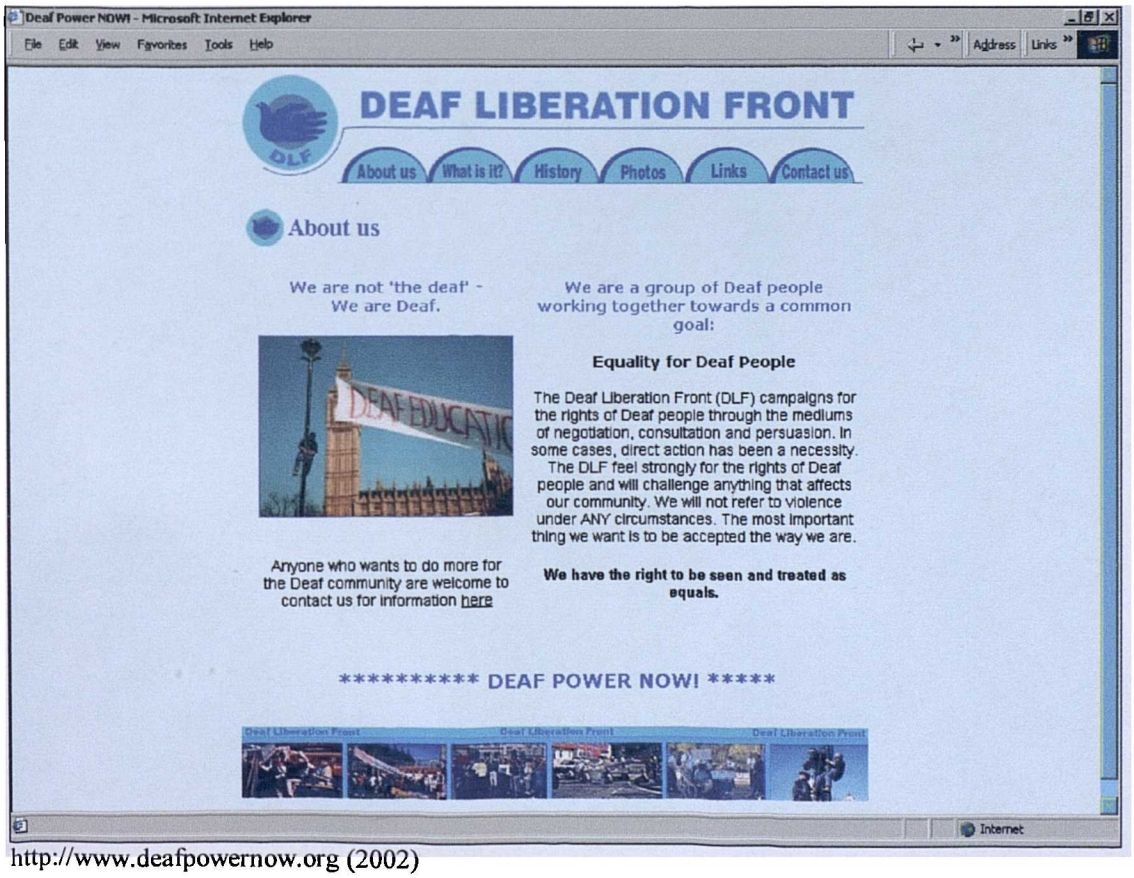
Figure 7.5: The Federation of Deaf People (FDP) homepage

http://www.fdp.org.uk (2002)

[82] Outside of cyberspace 'Voice' is the name of the FDP's magazine.

Illustrated in Figure 7.6, is the website of another radical group, the Deaf Liberation Front. In its infancy and more a collection of individual activists than an established organisation, the DLF encourages non-violent direct action (nVDA) against various injustices experienced by D/deaf people. Specifically the focus is on BSL recognition, campaigns against cochlear implantation in children, and the need for an overhaul of Deaf Education policy. The website has a lot of photographs of members involved in nVDA protests, designed to encourage and raise a notion of Deaf consciousness. On the left in blue lettering the phrase 'we are not 'the deaf' - We are Deaf' is clearly stating the commitment to both a cultural and natural form of being D/deaf. Linked to this is the slogan at the bottom 'DEAF POWER NOW!' that echoing Black civil rights highlights the political intentions of social justice and equality. Here the computer is being employed to create a space of resistance.

Figure 7.6: Deaf Power Now homepage



http://www.deafpowernow.org (2002)

Another important area of community development on the Internet is the formation of chat-groups. The two main D/deaf groups in the UK are called DeafChat and Deaf-UK. Figure 7.7 shows the homepage of DeafChat, begun by Brendan Casey in 2001, the site follows the in-house style of MSN[83] and therefore includes a band of adverts at the top of the page.

Figure 7.7: DeafChat homepage

http://communities.msn.com/DeafChatGroup (2002)

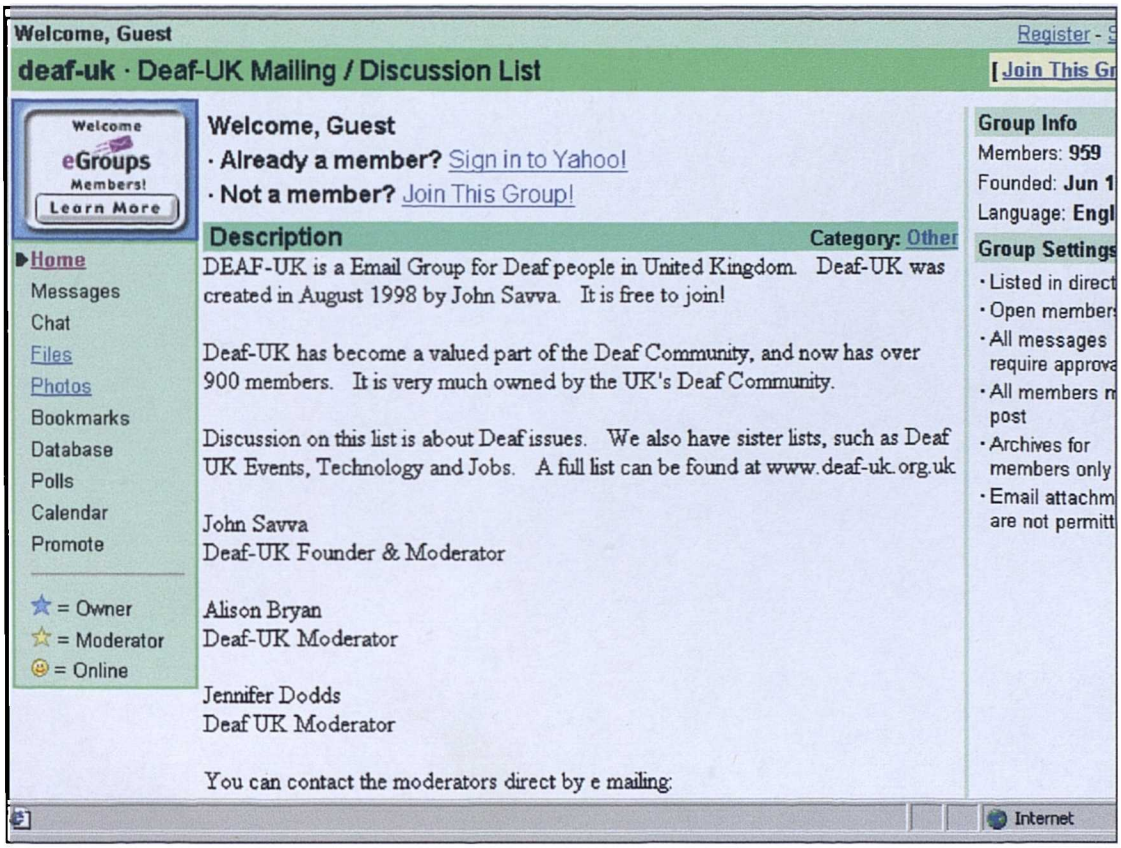
The flag in the middle of the screen indicates national allegiance, which may be present to distinguish this group from another also called DeafChat in the USA, but also is clearly designed to promote British Deaf Community. In this chat-group, individual members choose the room they wish to enter and then engage (chat by typing) with whoever is also on-line at the same time. The subject matter is up to the individuals and therefore does not have to be D/deaf related. The two hands on either side of the flag provide a visual reminder of sign, and are

[83] MSN - Microsoft Network

employed as a welcome. This site is designed as a conversation space that encourages D/deaf people to engage with each other.

In the other chat-group, Deaf-UK, set up by John Savva in 1998, the communication is asynchronous as people post their messages in response to a thread. Individuals can choose to receive emails as they clear or as a daily digest. Responses therefore are often not sequential, as such the communication is rhizomatic rather than linear. Like DeafChat, Deaf-UK also follows an in-house style of presentation, in this case yahoo, as can be seen in Figure 7.8.

Fig 7.8: Deaf-UK homepage



http://groups.yahoo.com/group/deaf-uk (2002)

Unlike DeafChat, the presence of three moderators ensures that all communication is D/deaf related and not just D/deaf initiated. The rules of this site relate specifically to the notion of the site as a Deaf space, where hearing people are welcome but must conform to a D/deaf agenda:

> 'Deaf UK is Deaf space, and this space is on Deaf people's terms. Hearing people are welcome here, but they are not allowed to intentionally oppress, patronise, or be disrespectful of how deaf people feel. Oppression takes many forms and this includes subtle ones. Through the very nature of how society is constructed, a hearing person may not be aware what they are posting is essentially oppressive towards Deaf people' (Deaf-UK policy – 2002).

Deaf-UK is designed as a community space, which, as all the emails are stored in an archive, is also becoming an important part of Deaf Cultural heritage.

This brief review of D/deaf websites has provided a background picture of D/deaf cyberspace. However, for a deeper awareness of this space we need to look at how it is lived. Situating cyberspace in the real world is a reminder that whilst much of the writings about cyberspace are based upon utopian ideals, people engage with the Internet pragmatically (Robins, 2000). To understand this configuration of D/deafness we need therefore to engage with the everyday practices of logging on. The responses of both D/deaf Internet users and site owners are therefore explored in the rest of the chapter.

On-line practices of Deaf cyberspace

Characteristics of respondents

Eighteen D/deaf people who were self-selected answered open-ended questions via e-mail. Of these, eight were site owners, and ten were site users. Mixtures of the same and different questions were given to the two groups (see Appendices 2 & 3). Site owners were D/deaf people who had designed and were currently running a website with a specific D/deaf focus. Site users were D/deaf people who were members of a D/deaf chatgroup. Overall, there were six women and twelve men, of these three women and five men were site owners, and three women and seven men were site users. Despite the popular notion that cyberspace is mainly occupied by young people, the ages of respondents ranged between twenty-one and seventy-four with an average age of thirty-six.

Table 7.1: Characteristics by gender, deafness type, family prevalence, hearing aid and cochlear implant use

	Women	Men	All
All	6	12	18
Own D/deafness			
Born D/deaf	4	9	13
Hard-of-hearing	0	0	0
Deafened pre-lingual*	0	0	0
Deafened post-lingual**	2	3	5
Family D/deafness			
Other family members D/deaf	1	5	6
No other family members D/deaf	5	7	12
Use of hearing aids			
Wear hearing aids	4	7	11
Do not wear hearing aids	2	5	7
Use of cochlear implant			
Have a cochlear implant ***	0	2	2
No cochlear implant (CIs)	6	10	16
Use of Sign language			
First language Sign****	3	4	7
First language English	3	8	11
Use BSL	6	9	15
Do not use BSL	0	3	3

* Prelingual defined as deafened before the age of two.
** Post-lingual defined as deafened after the age of two.
*** One man added that whilst they had a CI they never used it.
**** Whilst first language in hearing children means learnt from birth, for many deaf people in hearing families it is often learnt at a school age of four or five years. Therefore whether first language was sign or English has been left to self-definition, but note ages of when learnt may vary.

As Table 7.1 shows, thirteen were born deaf, and five were deafened post-lingual. A third were born into families with other D/deaf members and two-thirds were born into hearing families. A large proportion wear hearing aids (11) and two had cochlear implants, although only one used it. Sixty one percent learnt English as a first language although BSL was clearly the preferred language of choice.

Connecting to D/deaf websites

The respondents accessed a range of D/deaf websites, including all of the sites reviewed. Discovery of the spaces were made possible in a variety of ways, not just from search engines and hyperlinks via the web itself, but also from word of mouth and Deaf print publications. Site users had been logging on to D/deaf

websites between one and seven years, some people looked daily (5), others weekly (2) and some occasionally (3). Assessments of the sites ranged between seeing them as good material sources, to complaints about both written and technical presentation of the contents.

> *'Good idea, great for sharing information, and connecting people together' (Liam, IU).*[84]

> *'Varies. Depending on the nature of my enquiry. Most of them are not as slick or up to date as many corporations' (Ollie, IU).*

Enjoyment of the sites related to the Internet's capacity for sharing information and ease of access for D/deaf people, especially over time and distance. Although site owners indicated that they were updating their sites either every day or at least monthly, dislikes by users highlighted the poor rate of updating as a problem.

> *'Enjoy them - not often it's that easy to access information for deaf*[85] *people' (Alan, IU).*

> *'They provide me with information that I would not otherwise have had. Up-to-date information on Deaf related issues' (Pat, IU).*

> *'Apart from the American sites, RAD and RNID, the other sites are not always updated. I dislike looking at old information, some of which are over two years old!' (Callum, IU).*

Seven of the ten Internet users, indicated that there was something special about D/deaf websites, mainly referring to the focus on D/deafness as well as the ability to connect to other D/deaf people.

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[84] IU- Internet user

[85] The use of either capital or lower case D/d remains as each respondent typed it in his or her e-mails. English use and grammar is also unchanged and sometimes therefore reflects BSL form.

'They contain deaf people from all over the world talking freely to each other for the first time ever. Nobody else seems to have noticed!' (Zach, IU).

'It's a vital visual platform of communication for deaf people' (Liam, IU).

Given the prevalence of aural input from radio and television, also the lack of D/deaf presence in the general news, the visual capacity of the Net was valued. Website use does appear to be a continuation of Deaf newsletters and magazines. The spaces are designed to encourage community and the sharing of information, although websites are still a relatively new form of dissemination. Site owners in this study indicated that the activation of their sites ranged between one week and four years. Obviously, site owners designed the websites to publicise their organisation, but they also concurred with user views that the sites were a vital form of information sharing about D/deafness.

'Free provision and knowledge wherever possible, as rightly deserved by the deaf Community' (Nick, SO).[86]

'Because in [year] *there are not much deaf websites in UK and I feel so frustrated to find deaf people on the Internet, and surprised how little information related to deaf Community in UK. I remember there is one popular newsgroup* [name of site] *gave me an idea to set up* [name of site] *for deaf people to help them to find each other, and help isolated deaf people who use Internet to involve deaf Community again' (Harry, SO).*

Cyberspace is another arena for the formation and in particular the display of identity (e.g. Miller & Slater, 2000). D/deaf people are indeed utilising the Internet to further develop the notion of a Deaf consciousness.

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[86] SO - Site owner

Being D/deaf in cyberspace

There are however, tensions between a perception of disability and the capacity for being proud through the impairment (e.g. Calder, 2002). For site users, there was a fifty/fifty split between people who were unreservedly proud to be D/deaf and people who qualified the possibility of Deaf pride.

> *'Proud with a capital "P"' (Ollie, IU).*

> *'I hate that phrase. I don't think there is any pride in being deaf, its just bad luck, but I do have a lot of pride in coping with the awkward problems it brings' (Zach, IU).*

> *'Neither proud or ashamed – it's a fact of life' (Robert, IU).*

> *'This is normal for me – don't know any different. Wouldn't exactly say I am 'proud' to be deaf – but I am not upset about it either. There are obvious limitations – e.g. in using the telephone, limited films with subtitles etc.' (Pat, IU).*

Nevertheless, there was evidence of the idea of a Deaf identity, as both site users and owners believed that the websites were D/deaf because they were designed and run by D/deaf people who 'naturally' had a specific understanding of what it felt like to be D/deaf.

> *'Got to be mastered by a culturally deaf person, who has an innate knowledge of Deafness and deaf issues and what makes Deaf people tick etc' (Ollie, IU).*

> *'Because it focuses on hearing loss and deaf life in general. Being deaf has an effect on people's philosophy e.g. the Hearies are all Bastards*

school of thought. A lot of people would agree with that one, untrue though it is' (Zach, IU).

'Something Deaf related that is CONTROLLED by Deaf people. This is different from hearing people creating the site, which comes across as missing the point' (Barbara, SO).

Site owners were also very definite about their websites being D/deaf spaces and that they had designed them to attract D/deaf people, however they also wanted their sites to educate a wider audience as this could increase public support (see Taylor, Kent & White, 2001).

'Deaf people and people who want to find out more about Deafness...' (Richard, SO).

'All browsers and finders of information, deaf and hearing alike' (Nick, SO).

'Anyone interested in Deaf Community and sign language, [organisation name], *human rights, etc' (Deirdre, SO).*

The majority of site users seemed to appreciate the efforts made on their behalf, as all but two users felt that the websites were making a difference to their lives. Zach explained that they enabled him to make contact with other D/deaf people, which given his living situation would be impossible otherwise.

'I live in the depths of nowhere so it's wonderful to have this access to other deaf people' (Zach, IU).

Liam appreciated access to information, which he felt enabled him to be more self-reliant.

'Yes, for instance, I did not know the AA has a SMS[87] *text number in case of breakdowns until I visited one of these sites, and have used it, enabling me to be more independent in the real world' (Liam, IU).*

Clearly contact with others and access to material data was considered important. However, this tends to be the general reason why anyone, not just D/deaf people, go on-line, so is there anything different about D/deaf cyberspace? Only two Internet users thought that the websites were different. Amy in particular seemed to identify with the sites and viewed them as places of belonging.

'Its home! I can relate to the issues mentioned and fun mentioned...and the fact we don't need to explain why we are deaf and we can use Deaf jargon/jokes without having to explain it' (Amy, IU).

Six people felt that D/deaf websites were no different to other websites. Whereas a couple indicated that D/deaf websites were not of the same quality as other websites, which they felt was due to communication difficulties.

'Somehow they are not so topical. Not so streetwise, it's difficult to put a name to it but they seem slightly out of touch on occasions. And of course some of them are written in BSL grammar, which is rather lazy in my opinion. I think deaf people need to study the Internet a bit more in some cases, they plunge in without realising what they are taking on. I put this down to a lack of peer feedback, hearies [hearing people] *can spend hours on the phone talking to each other through things, something we can't do' (Zach, IU).*

This question appears to have mainly been interpreted in terms of quality, i.e. are D/deaf websites as good as other sites? When site users were asked how they felt when they first logged on and discovered D/deaf cyberspace they were more enthusiastic.

[87] AA - Automobile Association; SMS - short messaging service (text messages on mobiles).

'Very glad these are vital to the deaf communities around the world' (Callum, IU).

'I felt good that there was a vast wealth of unbiased information available for deaf people and also for hearing people about deaf people' (Liam, IU).

'Great 'cos I could now access information readily outside my inner sphere of contacts etc. Also I didn't have to write away for info etc.' (Ollie, IU).

Cyberspace is all about association, with the technology of computers and modems, but also with other humans. In D/deaf cyberspace, this connection is also explicitly based on a notion of being D/deaf as a natural phenomenological experience for some people. Politicising D/deafness, they serve to further the configuration of Deaf Culture.

Deaf Cultural spaces

Cyberspace can be seen as a continuation of real-life (Wellman & Gulia, 1999), where community relations can be fostered and D/deaf people can create their own discourses of D/deafness. Virtual space is not however the same as real space it is instead a combination of the two, in other words a hybrid space (Ward, 1999). In addition, cyberspace can also be seen as a mixture of both public and private space (Fernback, 1997). Engagements therefore can be both intimate and distant at the same time. In fact, in Deaf Community outside of cyberspace, this already occurs to some degree. First, because Deaf Communities in local areas tend to be quite small and insular so everyone knows everyone else and what each other is doing. Second, because sign language can be seen from a distance, community gatherings really are collective and D/deaf people can have conversations with someone on the other side of the room. Whilst it is rude to

stare, the spaces of communication between D/deaf people are more open than those conducted orally and thus the public and private is more in-between in Deaf Culture, and perhaps in some ways more in tune with the practices of cyberspace. In agreement with Rheingold's (1994, 2000) notion of virtual communities, the majority of respondents (15) believed that D/deaf websites played a part in the creation of Deaf Community. When logged on most of the site users felt connected to other D/deaf people (8).

> *'Yes very much so. Far more that I used to. I keep coming across people I went to school with, I would never have run across them any other way' (Zach, IU).*

> *'Only recently become involved but can relate to many of the issues and have responded to those in a similar situation to me' (Pat, IU).*

As Negroponte (1995) suggested, the potential for global connections was also recognised.

> *'We tend to get in touch with Deaf people all over the globe and many of us have friends in many countries' (Alan, IU).*

> *'I think there are links between deaf people in every country, but stronger in your own. The potential is there with the Internet' (Pat, IU).*

To ensure that the websites were D/deaf, site owners indicated that the rules of their website's included accessibility for D/deaf people, but also that control was accountable to the wider Deaf Community.

> *'The most important being that the site must be accessible by deaf people and try to make it as visual as possible. Also the* [name of committee] *must authorise anything that is put on our site before it goes online' (Richard, SO).*

'Well I am a deaf manager and it is run by deaf managers' (Carl, SO).

'Need careful planning of websites and consultation with Deaf communities' (Anthony, SU).

Locating cyberspace as part of real-life highlights that like any other space there are inclusions and exclusions (Kitchin, 1998b). A main distinction is made against hearing people. However, even though D/deaf websites are considered Deaf spaces that are run by and for D/deaf people, all the respondents thought that it was ok for hearing people to use them, as a D/deaf presence on the Net served to educate hearing people.

'It allows the hearing community to learn about deaf Culture' (Imogene, SO).

'We want hearing people to become more aware!' (Deirdre, SO).

'I think its even better if hearing people use/access the sites, as it would open up the deaf world to hearing world; bridging the gap one might say' (Liam, IU).

'All people, hearing and deaf, multicultural attitude' (Carl, SO).

Although there were concerns that hearing people may try and take over the D/deaf focus and control of the sites.

'The more the merrier but they must understand that deaf people's problems are 100% due to hearies and behave accordingly. I wouldn't want to see hearing propaganda being put about in deaf conferences...The predominant philosophy must be of deafness not of hearing' (Zach, IU).

'Why not. Internet is for all...More the better but as long as they don't jump on the bandwagon and steal from us as they normally do with jobs, training opportunities and so on' (Carla, IU).

'You cannot stop them, but I don't have any objection provided they have something worthwhile to contribute - even if controversial. So long as these hearing people understand that deaf people's needs are different' (Pat, IU).

Other D/deaf people such as hard-of-hearing people were also welcomed by everyone but maintaining the D/deafness of the site was again considered to be important.

'Yes as they need the same access to information as Deaf people do' (Richard, SO).

'Yes as long as they don't expect us to help them out with their problems' (Amy, IU).

'Why should we discriminate against them when we are also asking for less discrimination against us? That would be absurd' (Zach, IU).

Overall, D/deaf websites were seen as making a positive contribution to Deaf Culture. Harry, a site owner, felt that his website had become an influential part of Deaf Community.

'Their lives have changed because I set up the website. Often I [am] *asked this question. What happens if I never set up this website, I look all the events outside the Internet have been happened in past few years,* [it] *would be very very different' (Harry, SO).*

For some site users, the sites had improved their lives by making them feel less alone and more able to connect with each other.

> *'I've been surprised at the outpourings of bitterness and anger I have seen from deaf people on the Net. It is reassuring to know I have not suffered alone from prejudice and ignorance and yet this is the first time deaf people have had the chance to express these feelings to other*[s] *who feel the same. It's very liberating. It is clear that many people have suffered as a result of our lack of communication. Yet every one of those messages reaches out and touches a spot in nearly all deaf people and I think it is this which will bring deaf people together and eventually they will learn to use this medium to improve our situation in society. I hope so anyway!' (Zach, IU).*

> *'I think computers and Internet have greatly improved Deaf people's lives as it is so easy to exchange information and leave messages about anything. It is all in visual so there is no chance of missing out and the people have a chance to keep the messages/emails in their records to refer back to. I know some Deaf organisations are holding some of their meeting in the chat room as it cuts down on expenses and time. It will never replace the need of meetings face to face but when it is to discuss an urgent item or small topic it is great!...Like SMS or mobiles it was probably never invented for Deaf people but it is very welcomed within the Deaf Community. The only snag is some Deaf people need training and there is little about to teach them to use the Internet for Deaf people so it is relying on word of mouth about the Deaf sites, chat rooms and issues' (Amy, IU).*

Given the lack of Deaf geographical origins, the material basis for 'Deaf Culture' is to some extent lacking[88] and thus partly parallels cyberspace association. D/deaf

[88] Whilst Deaf Communities tend to be localised and Deaf Cultures are connected to nation states and thus have a strong material basis, there is also the notion of a global Deaf Culture and Community that is based upon the feeling of being like others.

people do feel emotionally connected to other D/deaf people via the Internet. Technology traverses culture. However, as part of the definition of D/deafness is centred upon the use of sign, the relationship between cyberspace and Deaf Culture is somewhat problematic. It could be argued that as communication in cyberspace occurs through the hands and eyes (i.e. typing and reading) there are links to signing, which also uses hands and eyes. Yet there is an important difference, in sign language, facial expressions are vital components of meaning and these are lost in the textuality of cyberspace.

Language and textuality

Boal (1995) asserts that

> 'Artefacts are congealed ideology. The computer, as designed, embodies the command-and-control structure of a hierarchical society' (p. 12).

Certainly, machines used in cyberspace reflect an aural and oral hegemony as transmission and engagement predominantly occurs through texts, which are mainly written in English. As already mentioned in chapter three, this can be a problem for many D/deaf people with poor reading skills, and is a continuation of the debate over English use in Deaf publications (see Dodds & Fowler, 2001; Thoutenhoofd, 2001). However, whilst the Internet can be seen as a continuation of this oral-visual culture, it also has the potential to be used creatively and waywardly (e.g. Stafford, 1994; Thrift, 1996a). Indeed Swyngedouw (1993) has argued that this acceleration of connection can alter existing power relations and lead to new forms of domination and subordination. As we have already seen, D/deaf people are utilising the Net as a form of resistance to lack of access to information spaces. Even so, most of the site users and owners (14) recognised that the lack of BSL in D/deaf websites was a potential problem for many D/deaf people.

> *'I do think that strong BSL users lose out – either due to poor English or not confidence enough of their own English to contribute' (Pat, IU).*

'...it is a problem for some people but as long as we respect the fact and not criticise their language level they write in – in long term it may even help them to improve their skill without realising' (Amy, IU).

'There are arguments, many BSL users who have problems with English feel left out when they don't understand other user who use strong English language, the issue always comes up' (Harry, SO).

Site owners were particularly concerned that their website should be as accessible as possible but felt that available technology limited visual options.

'Yes it does [matter] *really, as English is not some deaf people's primary language but video compression takes too long, to download on websites so it's difficult' (Richard, SO).*

'...but we need to work with the technology that we have at the mo' (Barbara, SO).

'Would be more accessible in sign language, but then again, I do not have the technology to create a website with only sign pictures on it. Maybe one day' (Imogene, SO).

Graphical displays are possible on the Net, but they are as yet limited on D/deaf websites, especially in chatgroups. When asked about technology they would like to see in the future, the commonest response from both users and owners related to the ability to include BSL and visual clips using for example webcams, video emails, and sign icon links to other pages.

'I would have more of it in sign language with people able to ask question and participate in the bulletin boards in sign language as well' (Deirdre, SO).

'The website would definitely be all in BSL. No English whatsoever so we could promote ourselves in the right way' (Richard, SO).

'Webcams with clear enough pictures to sign/lipread in full' (Robert, IU).

'Add on sign language and use webcams more...maybe set up a chat room solely in BSL! whhhooo that would take up a lot of bandwidth' (Amy, IU).

Thus, despite the obvious visual appeal of cyberspace, the lack of BSL on D/deaf websites at present may strain the definition of Deaf Culture. Related to this is a further problem. As sign language cannot be translated in to text, so communication requires complete physical presence, which works against the associations of cyberspace.

Presence and absence

In cyberspace, presence or connection is facilitated through a machine. At the same time, there is an absence of face-to-face meeting, which creates a tension for the transmission of Deaf Culture. Reflecting the uneasy relationship between presence and absence in D/deaf cyberspace, there was a mixed reaction over whether or not emails and websites would result in less need to physically meet other D/deaf people. For Robert, Pat and Imogene, communication through machines did not lead to true social interaction.

'People need social interaction – email and the web are just words on a computer screen. You can not touch, feel, or express emotions in the same way as you can face to face' (Robert, IU).

'I think it would be a shame if the use of the Internet/emails stopped people meeting each other physically. I can see that you can have a good 'chat' on-line, but it is not the same as two-way conversation. Also I think it is important for deaf people to meet to keep the use of BSL

strong...There is definitely need for social interaction much more healthy that sitting at a computer indoors all the time. The sites might be a good way of introducing people though, whom they might not otherwise have met – especially as the younger generation tend not to attend the Deaf clubs' (Pat, IU).

'Not really, the Internet medium cannot replace the human contact' (Imogene, SO).

Ollie, Carla and Deirdre believed that this interaction was the basis for Deaf Community and based their reasoning on a natural notion of Deafness, being both visual and in need of social contact.

'People need human contact to maintain a realistic sense of community and need to be able to see each other physically. Deaf people are a physical/visual people and need face and face contact. Also many deaf people don't have the command of written English many hearing people do so aren't able to express themselves in the way they could face to face' (Ollie IU).

'The very nature of the Deaf Community is social contact so that will never die out' (Carla, IU).

'No, because for Deaf people sign language and visual communication is still number one' (Deirdre, SO).

Alan felt that other communication technologies, such as mobiles were also reducing the need to meet face-to-face.

'SMS contributes to this as well. [In the past] *Had to meet people in person to get information and this create opportunities for socialising, less of that nowadays' (Alan, IU).*

Callum however valued the functional aspects of cyberspace and saw the Net as a telecommunication tool that enabled him to set up face-to-face meetings.

> *'No, emailing should not be seen to make Deaf people anti-social. It is a matter of convenience in getting in touch with each other by making arrangements to meet or by checking facts among other things' (Callum, IU).*

Amy and Zach agreed that cyberspace was a tool to utilise, but they also felt that these technologies would extend Deaf Community and lead to more meetings not fewer. This parallels Graham's (1998) economic argument that material and electronic space are 'increasingly being produced together' (p. 174), although here, it is occurring socially.

> *'I think the medium will result in more f2f* [face to face] *meetings not fewer...I think they will become a central pillar of deaf social life when everyone learns how to use them' (Zach, IU).*

> *'The fact people are using email and passing on information means that Deaf people are hearing about things and will turn up at the events and parties also it does actually increase the physical need! It is so easy to post an email to all your mates to meet up at the pub at a particular time and day and there will be more people than you emailed' (Amy, IU).*

As well as extending human contacts in real space, encounters are occurring in virtual space. Being on-line is becoming another place to meet (Parks, 1996). Illustrating that 'online-ness' is both contained within cyberspace and also porous with reality (Franklin, 2001). Both Richard and Harry stressed the extended reach of D/deaf cyberspace that for them supplemented real life.

'No, I think that the provision of Websites and email open up the world to Deaf people, and allow them to meet new people through this media. It broadens their horizons not restricts them' (Richard, SO).

'It makes deaf people to meet up more and making new friends as we have [site name] *which advertise all deaf event and you would notice your old school friends and use* [site name] *to say hi' (Harry, SO).*

For Fred and Barbara, both cyber and physical connections were equally important. However, Barbara highlighted the difficulties reconciling BSL with cyberspace, which she hoped would be solved by further advances in technology.

'I think it is important that Deaf people meet up and socialise in a friendly environment, but this should be in addition to getting out and sampling the world out there. And of course emails and websurfing extend the horizons of everyone, not just Deaf people' (Fred, SO).

'Yes and no. Yes, because people are getting info at the tip of their fingers and there is no need to physically go and meet people to get this. The Internet allows info to be displayed more visually, to some extent, than a minicom or even fax has allowed. However, it still does not get around the issue of presenting BSL, and human interaction, so there is still a need to meet up. However, this could be reduced in the future with the further widespread of webcams, and increased speed' (Barbara, SO).

Whilst cyberspace is not seen as an absent encounter, a physical presence not overtly mediated by a machine is clearly valued. D/deaf cyberspace is perceived as a supplement to the real space of Deaf Culture, as current technology limits the engagements of a community that requires visual proximity.

Summary

At the beginning of this chapter, cyberspace was highlighted as mutable, where networks and flowing associations between humans and non-humans illustrate the interactions of nature, culture, and technology. Mired in binary thinking however, the simultaneity of connection and disconnection is not always recognised. Therefore, cyberspace can be seen as disembodied and unable to facilitate true community. Yet it can be argued, people form attachments in cyberspace, so the notion of community based on spatial imaginaries of belonging are just as present. Indeed technologies facilitate these relationships and enable humans to connect to each other. Furthermore, whilst bodies are not always apparent in cyberspace they are at the same time inescapably part of all experiences, including those in virtual reality. Corporeality extends beyond the skin, as human minds can travel distant pathways yet always remain part of bodies. A disabled perspective that is materially premised, illustrates that community can occur at a distance, and that the possibility of disembodiment in cyberspace is rooted in an abnormal/normal distinction that values the notion of purity and denies the reality of difference. Even so, the association between cyberspace and disembodied connections continues to be potent.

Looking at D/deaf cyberspace, the selection of D/deaf websites reviewed highlighted that the creation and maintenance of Deaf Culture is increasingly occurring in cyberspace, and that these connections are based on an embodied notion of being D/deaf. The practices of being on-line, as either site users or site owners, revealed the extent of D/deaf cyberspace use. The D/deaf people in this study were using D/deaf websites to share information and connect to other D/deaf people. D/deaf site owners were creating D/deaf websites as Deaf spaces, defined by their D/deaf content and the fact they were designed and run by D/deaf people. Thus, rather than being a disembodied space, virtually separate, the corporeality of deafness is seen as the basis for the connection. Similarly, many of these sites are specifically designed to encourage Deaf Community engagement. Indeed, a notion of belonging was experienced by Internet users.

Deaf Community is to some degree already spread out and so D/deaf websites furthered the possibilities of association; they fitted into the established pattern of Deaf Community. However, despite the visual value of D/deaf cyberspace, tensions existed between the use of text and the lack of BSL. Strong BSL users, who due to past teaching methods may lack a good working knowledge of written English, can be excluded from D/deaf websites and chatgroups. This works against the creation of Deaf Community and notions of cultural Deafness. Consequently, these websites are to some extent positioned outside Deaf Culture. However, this was recognised as a problem, and future technologies with enhanced graphic capabilities that would allow the transmission of BSL are constantly being reviewed by the site owners, and would be welcomed by the D/deaf Internet users. D/deaf websites could also be seen outside of Deaf Culture in relation to physical presence. Again, this is connected to BSL use, but is also due to the traditional operations of Deaf Community belonging and participation. The absence of proximity afforded by cyberspace interaction may dilute the collective experience of D/deafness. Overall, however, both the site owners and users believed that their involvement in cyberspace enhanced their social interaction, both on an 'absent' level 'in the wires', and through an increasing number of meetings in 'real' space that originated through contact made on the Internet. Consequently, D/deaf people's use of cyberspace, especially when BSL can be used, is likely to play an increasing role in the expression of Deaf Community.

Chapter Eight: The Fluidity Of D/deafness And Bodies

The inclusion of D/deaf issues within human geography is important on grounds of equity. At the same time, D/deafness contains unique identities that can help illuminate geographical concerns with hybridity and relational ethics. Working towards the incorporation of D/deafness, and furthering theorisation of fluidity that critiques the distinction maintained between disability and abnormality, this thesis concentrated on D/deaf people's interactions with technologies. From the perceptions of D/deaf people themselves, three key areas of interest were identified: The impact of mechanical associations on individual and collective identities of being D/deaf; the spatialisation of D/deaf people's technological relationships, including embodied space, community space, and cyberspace; and the individual and collective implications of the mediation of machines with BSL. In addition, D/deaf people's connections with machines were found to be multiple situated, and so informed geographical understanding in three interrelated directions: First, the social model of disability was critiqued and reworked, thus extending the theoretical basis of geographies of disability. Second, existing knowledge of D/deafness was extended through a consideration of a relational approach. Third, the notion of fluid space was developed further, and rhizomatic systems of associations were incorporated, which challenge the bound and normative view of 'the body'.

Being D/deaf and technologically connected

D/deaf people's interactions with technologies operate on both an individual and collective basis. Whilst these experiences have been separated out in this section due to ease of organisation, it is important to remember that they can constantly interrelate; being D/deaf is both a self and community identity. And even if self-identity is deaf rather than Deaf, this still reverberates upon the construction of D/deafness.

Technology and individual D/deaf identity

The D/deaf people interviewed in this study associated with a range of devices designed in connection with their deafness. These were usually either visual alternatives to aural equipment, such as flashing alerts to fire alarms and doorbells, or amplification devices, usually hearing aids. The presence of some of these nonhumans was valued as they made life easier and increased personal confidence. Machines that provided access to information also increased autonomous control. Accepted technological interactions were positively experienced and incorporated into everyday practices, however the equipment itself was relegated into the backdrop of life. This was an unconscious effect stemming from the familiarity of the objects, and a conscious placing of assistive devices away from labels of 'special' premised upon notions of abnormality. At the same time, these technologies were in motion. When a machine didn't work, engagement with it increased as the reasons for its breakdown were discovered and hopefully fixed. Thus, objects moved out of the background when they were not functioning properly, and dropped back in again if they could not be mended. The consequences of these non-working devices depended upon degree of need, and technological failure was seen as more significant when there was no other sensory mode to switch to. In other words, D/deaf people in certain circumstances need particular equipment more than hearing people because the technology either acts instead of auditory sense, or supplements other senses such as vision. Technologies also marked differences and exerted a presence when they were both present and absent. Intrusive equipment was therefore experienced as problematic, as other people saw it as abnormal and subsequently placed D/deaf people as 'abnormal' and inferior. Large chunky devices felt patronising and increased the visibility of users, making them self-conscious and uncomfortable. The absence of assistive devices also called them to attention, as awareness of health and safety issues was heightened when there were no accessible alarms in place. Indeed, the lack of specific equipment, for example flashing or vibrating fire alarms, in most public buildings, can result in anxiety and the inability to securely use certain places.

Inadequate provision of certain technologies also exposes both the continuation of a corporeal divide, between normal and supposedly abnormal bodies, and the co-option and subsequent mediation of this equipment. Cochlear implants, for example, were not used by any of the D/deaf people in this study. Indeed, overall, they were passionately rejected because they were seen as incompatible with a Deaf identity; but they were accepted when someone was deaf. A major distinction operated between being born D/deaf, in which case the CI was an 'unnatural' disruption of an individual's body, and being deafened, in which case the CI was a 'natural' restoration of an individual's body. A CI therefore, can be both normal and abnormal, and this can map onto bodies. From a Deaf perspective, a deaf person with an implant is more 'normal' whereas a Deaf person with one is not. This can shift again, when a socio-medical perspective is included. Here someone with a CI is always 'abnormal' whether they are Deaf or deaf, but nevertheless the implant, in achieving some measure of hearing, makes them 'more normal'. A further distinction was made between D/deaf children and D/deaf adults. For D/deaf children CIs were experienced as an oppressive component in networks of oralism. As chapter three highlighted, oralism has a long history and various devices have been invented or utilised in the endeavour to suppress sign languages. CIs therefore were seen as the latest hearing tool aimed at turning D/deaf children away from their 'natural' heritage of Deaf Culture and use of BSL. Consequently, CIs despite being aimed at D/deaf people were placed as hearing and suitable for deaf adults, but not D/deaf adults or D/deaf children. CIs cut across binaries, they are not only normal *and* abnormal they are deaf *and* hearing, depending on context and the political and emotional inscriptions attached to them.

Hearing aids are also ambiguously situated. D/deafness can be identified by the presence of hearing aids, as they are obvious markers of sensory difference, but like CIs, they are often rejected by D/deaf people. Seen as an invention that can 'overcome' deafness, D/deaf people are expected to wear them and indeed all but one of the D/deaf people who were interviewed in this study chose or had in the past been forced to use hearing aids; although just over half (10 out of 19) no longer used them. When deafness is profound, hearing aids may give little

benefit; they may amplify painful noises, or provide no experience of sound at all. At the same time, the decision to wear hearing aids can rest on the equation of deafness with disability. The machine marks the disability, therefore rejecting the label of disability especially its connection to abnormality, leads to a decision against their use. In addition, and interrelated to the positioning of deafness, D/deaf people in this study didn't wear hearing aids because they are proscribed through oralism. The D/deaf people who did use hearing aids were very aware of these issues, however they chose to employ them instrumentally. For some this involved access to the emotional experience of music, for others they helped communication with non-signers; they provided a bit of hearing. Thus, whilst hearing aids are seen as deaf from a hearing perspective, they are conversely seen as a hearing from a Deaf perspective, and for D/deaf people who use them they are both hearing and deaf. Hearing aids therefore shift around binaries.

Individual D/deaf identities were also being performed on the Internet with computers. Indeed, through the creation of D/deaf websites by D/deaf site designers and owners, D/deafness was being constructed as well as maintained. These connections can operate in resistance to the bio-politics of deafness, although half of the D/deaf Internet users in this study qualified the notion of Deaf pride in relation to their own deafness, seeing it as a fact of life rather than a positive identity that they embraced. Even so, the personal aspects of being deaf were an important component in the decision to use D/deaf websites. Both the site owners and site users mainly identified a website as D/deaf by its content (covering D/deaf topics), and by whether it had been set up and was still being controlled by a D/deaf person. Thus the sites not only gave access to information about D/deaf issues, they were also run by someone who was themselves D/deaf and therefore most likely to understand this sensory difference. Indeed, Internet users were enthusiastic about the ability to share experiences of being D/deaf, and the presence of a machine was seen positively in terms of allowing time-space reduction and visual transmission.

D/deaf chatgroups in particular improved D/deaf people's lives by reducing their geographical isolation, and by helping them understand that they were not alone

in their experiences of discrimination and frustrations with communication. There were however concerns about an over reliance on the technological mediations of human interaction. Intensive use of e-mails can reduce face-to-face meetings and this has implications for the continuation of Deaf Community, especially in relation to BSL use. D/deaf Internet users in this study were divided over this issue. Some felt that chatgroup communication whilst important was not true social interaction as the ability to have a two-way conversation was limited and e-mail exchanges lacked emotional content. Consequently, they believed that communication technologies, like e-mail and textphones, were reducing meetings in 'real space'. Others however thought that an individual's use of chatgroups led to more not fewer face-to-face interactions. The technology was seen as a convenient visual tool that could be used to arrange meetings with other D/deaf people. A further view, stressed the importance of both 'real' space and cyberspace, where physical contact with other D/deaf people was an important aspect of D/deaf identity, but the Internet could also be used to extend D/deaf people's horizons and their access to worldwide information.

The use and acceptance of 'D/deaf' technologies depends upon an individual's D/deaf identity, and whether specific devices fit within their self-construction and practices. At the same time, technologies also have a collective impact and their use can be mediated by the convictions of Deaf Community.

Technology and collective D/deafness

All but two of the D/deaf people interviewed considered themselves members of their local Deaf Community. They experienced this collective Deafness as a sense of belonging, where social ties were forged through a shared history and use of BSL. The heterogeneity of Deaf Community was highlighted through the presence of different interest and demographic groups, for example, D/deaf footballers, D/deaf lesbians, etc. There were also various routes into Deaf Community and the physical fact of deafness did not automatically result in membership, although a cultural heritage of Deafness largely did. D/deaf people who were born into D/deaf families felt naturally part of Deaf Community, as they were fluent in BSL, and their parents had facilitated their membership

throughout their childhood (particularly in their local Community). D/deaf people from hearing families, had to formally join Deaf Community - through learning BSL, attending Deaf Clubs, and crucially through an acceptance of their own D/deafness as a positive part of their self and collective identity. They had to both accept themselves and be accepted by other D/deaf people. This was sometimes a struggle, and could be mediated by Deaf Community responses to an individual's use of various technologies. Belonging to Deaf Community is defined by participation, use of BSL, and pride in being Deaf. Equipment that is designed to enable a perception of hearing, at present hearing aids and cochlear implants, can to some degree interrupt this configuration of Deafness. Deaf Community may accept or reject a D/deaf person on the basis of their engagements with these devices.

Hearing aids have an ambiguous position within Deaf Community. But as most D/deaf people are forced to wear hearing aids when they are children there is a familiarity with this particular technology. However, whilst all the D/deaf people who were interviewed in this study felt that a hearing aid user could be part of Deaf Community as it was their personal choice, the ten D/deaf people who did choose to wear them indicated that their decision was not always respected. They had sometimes been confronted over their hearing aids and had been classed as deaf rather than Deaf because they chose to use them. What seemed to matter was the emotional and political reason for wearing the hearing aids and whether this fitted into the ethos of Deaf Community. If hearing aid users stressed the importance of sounds and were boastful about what they could hear, this would be frowned upon as it puts down fellow D/deaf people, and works against the notion of Deaf pride and collective identity. But if they were used as functional tools on an individual basis that didn't threaten the principles of Deaf Community, then they were considered more acceptable.

Cochlear implants may fulfil the same physiological function as hearing aids, but they are less ambiguously positioned. Indeed, CIs are mainly believed to be antithetical to Deaf Community. D/deaf people interviewed in this study were in general sympathetic to their use outside Deaf Community, i.e. by deafened adults

who were culturally hearing, but were wary of their connection to Deaf Community. For D/deaf adults, individual choice was again respected, and whilst their Deaf Community membership could in theory be maintained, in practice was considered difficult to achieve. CIs are seen as detrimental to the status of BSL and Deaf Community. Choosing a CI is thus a political decision that goes against the majority opinion. Consequently, as the D/deaf people interviewed in this study highlighted, a CI wearer can be dismissed in relation to their Community connections. The presence of the machine affects the position of the user, they have in effect chosen against Deaf Community. For D/deaf children, there is little individual choice being exercised as the decision to implant is mainly being made by hearing professionals and parents. In addition, the procedure is still to some extent experimental, and the long-term affects on health and mental wellbeing are not yet properly understood. Moreover, D/deaf children from both D/deaf and hearing parents represent the future, and the link between CIs and an oral education threatens the continuation of BSL and ultimately Deaf Community and Culture. D/deaf people interviewed in this study, whilst very angry about the dismissal of D/deaf people's opinions were on the whole pragmatic about their use in children. They recognised that CI were becoming more common and that D/deaf children with them could still develop a strong Deaf identity, and should therefore be included in Deaf Community; at least until they were adults and able to exercise their own choice over the implant.

Deaf Community is also occurring on the Internet through D/deaf websites, which reflect D/deaf organisations, and range in scale from the global WFD to UK national organisations such as BDA, RNID, and FDP. The WFD site promotes an international Deaf Community that is linked through the shared experiences of being D/deaf. The UK organisations, with the exception of the RNID, also work towards a shared sense of D/deafness, which is based on the use of BSL, common experiences of discrimination, and resistance to oppression. The RNID site appears to be less concerned with Deaf Community and more orientated towards deafened, hard-of-hearing, and oral deaf people. These sites, including the RNID, reveal both the diversity and commonality of D/deafness. A

further arena for collective Deaf consciousness is being provided by the creation of D/deaf chatgroups, for example DeafChat UK and Deaf-UK. Here, D/deaf people connect with each other via e-mails and receive up-to-date information about D/deaf issues. The effect is similar to the long-standing practice of Deaf newsletters and publications, although the speed and spread of dissemination have both increased. Whilst the Internet is not accessible to all D/deaf people, especially 'grass-roots' D/deaf people who may struggle with the use of written English. D/deaf Internet users nevertheless believed that the sites were contributing to Deaf Community on both a national and global scale, as they felt connected to other D/deaf people and were made aware of D/deaf issues. Furthermore, they stressed the importance of accountability, where D/deaf websites had a responsibility to reflect Deaf Community in both virtual and 'real' spaces, and both expected and wanted a collective engagement with the use of computer technology. Site owners also wanted to include and thus educate hearing people, which as one respondent suggested, could 'bridge the gap' between them. Site users agreed, although they stressed that D/deaf websites needed to retain their D/deaf focus and continue being run by a D/deaf person.

From a collective perspective, technologies are negotiated in relation to their network connections and the political implications of their use. For D/deaf people this relates in particular to whether technologies are compatible with BSL and Deaf Community resistance to the dominance of oralism. In both individual and collective connections with technologies, there is a fluidity of movement as the devices can be considered Deaf, deaf, and hearing, and this multiplicity is spatially experienced.

D/deaf spaces

D/deafness is inherently spatialised – through positioning on the basis of normalcy, through modes of communication, and through the active creation of places that are both symbolic and material. Technological connections therefore interact with various D/deaf spaces. Because D/deafness is a sensory difference, these associations centre upon corporeality and embodied spaces, which in turn

impacts upon Deaf Community spaces, and increasingly influence the development of D/deaf cyberspaces.

Embodied spaces of D/deafness

Bodies are the sites of natural and cultural inscriptions, which are based upon paradigms of normality. Bodies that have different sensibilities, such as D/deaf people, are therefore placed as disabled, and technologies that are designed to assist with deafness operate within these bio-political networks. Resisting these connections, D/deaf people have also promoted technologies that can be used in a DEAF-WAY, that is, are compatible with a Deaf identity, where deafness is not situated as a negative difference and oral language use is not privileged over sign. There are thus numerous rhizomatic routes to D/deaf people's technological associations. A dominant one is driven by medical concerns with pathology that aims towards the rehabilitation and future 'cure' of deafness. Technologies that are part of this route are increasingly and intimately being placed within D/deaf bodies. For example, (as illustrated in chapter three) hearing aids have moved from large wooden trumpets that were held against the ear, to small transistors worn behind and in the ear, to cochlear implants that fit underneath the skin. Other technologies, which are typically seen as being more compatible with a Deaf identity, are placed outside bodies, and these mainly operate in connection with vision, for example flashing alarms. In addition, traversing a slightly different direction and relying on a further sensory mode, there are technologies that operate outside corporeal space but inside embodied space. By this, I mean assistive devices that rely on vibration; these are placed on the body (next to the skin) but not within the body (under the skin).

Overall, in this study D/deaf people preferred technologies that could be kept outside corporeal space. Vibrating pagers for example, were perceived to be too heavy, and as they had to be constantly checked did not fade into the background and thus interfered with the rhythm of everyday practices. Furthermore, even if they were perceived as normal in the home spaces they could be experienced as abnormal in public spaces due to people staring, and this made D/deaf people, especially young D/deaf people, feel uncomfortable. Technologies that were placed within the body were even more difficult to negotiate. Attachments to

hearing aids depended upon their location of use. D/deaf people who chose to wear hearing aids mainly wore them in public spaces and removed them in the private spaces of their homes. This helped them to relax and have a much-needed break from the experience of noise. The ability to remove hearing aids was seen as a necessary part of D/deaf people's control of their body spaces. Indeed, some of the objections to CIs were due to the intimacy and permanency of the connection. CIs can be switched off just like hearing aids, but parts of them are embedded in the skull and can't be removed without surgery. This was felt to be unnerving as the human/nonhuman divide was breached. The aesthetics of the implant were also an area of concern and were seen by some to be a deliberate (and in the case of children an enforced) disfigurement. As CIs disrupted the perceived boundaries of D/deaf bodies, they shifted further towards corporeal abnormality, moreover they are premised upon an oral agenda with a long history of oppression, they were therefore felt to be incompatible with Deaf embodied space. Instead, technologies that could be situated further away from bodies, like visual flashing alarms, were preferred, especially as they could be relegated to an unconscious level and so didn't interfere with embodied practices.

Deaf Community spaces

Deaf Clubs, where D/deaf people who use BSL can associate together, enjoy each other's company, and crucially be in a signing space, have been important for the operation and continuation of Deaf Community. Indeed, they have acted as Deaf locations, by providing places for the performance of a Deaf identity that ensures the dissemination of Deaf Culture. In recent years, whilst the centrality of Deaf Clubs and Centres has declined to a certain extent they nevertheless continue to play an important part in the lives of D/deaf people. In this study, the needs of both elderly and young D/deaf people were highlighted as significant areas for Deaf Clubs to be involved in. For example, elderly D/deaf people could access social services through the Clubs and young D/deaf people, especially those coming out of mainstream schooling, could encounter Deaf Community through participation in social evenings. Deaf Community spaces were also considered important in terms of visibility. They advertised the presence of D/deaf people, revealing both the specificities of Deaf Culture and the

ordinariness of D/deaf people's lives. Politically, this locates D/deaf people as both the same and different. D/deaf people have the same social engagements, such as quiz nights and festival occasions, but they are conducted in a different mode of communication, which affects practices of association. Being signing spaces, Deaf Clubs were places to relax in where D/deaf people had access to social exchange and everyday information about their environment. It was suggested that the perceived decline in Deaf Club participation could be due to the rise of home entertainment technology for example game machines and DVDs. Certainly, DVDs and Deaf campaigns to increase subtitling facilities are making film and television more accessible to D/deaf people, and this could be having an affect on their desire to socialise. However, this provision is reliant on written English skills and there is very little (with the exception of the BBC sign zone) BSL translation, thus the signing space provided by Deaf Clubs is still important.

In this study, Deaf Community spaces were valued, but they were also experienced as somewhat boring. D/deaf people interviewed were over familiar with their local Deaf Club, which hadn't been changed in years. The atmosphere was considered lacking and dated, and the presence of the whole of the local Deaf Community (young and old) was sometimes experienced as restrictive. Older D/deaf people wanted to enjoy a drink without worrying about the impression they were making on children, and young D/deaf people wanted to enjoy themselves away from the gaze of their parents. Consequently, Community engagements were widening out into other spaces, such as pubs or cinemas that are not specifically designated as Deaf. These spaces were being used despite the lack of assistive technologies provided. Health and safety equipment and other suggestions, such as the provision of videophones and a flashing light to indicate last orders, would be welcomed in terms of equitable access, and in recognition of the profits received from D/deaf patrons. However, the presence of these technologies was a contentious area. There were concerns over the visibility of machines and the subsequent possibility of social stigma being experienced. D/deaf technologies could also negatively affect the atmosphere of the environment. This could operate generally if all users of the space were too

aware of the equipment, and specifically if D/deaf people were unable to relax because their leisure space had become too like their work space. Whilst technologies may seemingly make a place Deaf the creation of a signing space and the social interaction between D/deaf people is in the end a more significant criterion.

D/deaf cyberspaces

The disembodiment of cyberspace is refuted by the continuing presence of corporeality; minds are not separate from bodies. Similarly, places and social interactions within virtual spaces still have a materiality; engagements may be symbolic but they are also real. Online communities therefore, although not quite fitting the traditional notion of a geographically bound set of relationships, are nonetheless facilitated through technological means, and are based on emotional attachments and feelings of belonging. Cyberspace is therefore fluid, heterogeneously comprised, and embodied. This can be illustrated through the presence of D/deaf websites, which increasingly are becoming part of D/deaf embodied spaces and Deaf Community spaces. D/deaf websites promote social interaction and construct various aspects of being D/deaf. The RNID website for example, clearly situates deafness as a disability, and provides information on the Disability Discrimination Act and assistive technologies that can be used to overcome being deaf. The BDA website, emphasises cultural Deafness, and therefore stresses the importance of access to BSL and other services from a human (and linguistic minority) rights perspective. Other websites, such as the FDP and DLF, are pro-active, campaigning spaces that aim towards the integration of Deafness and recognition of BSL. Indeed, through these sites and subsequent marches in 'real spaces', the major goal of BSL being recognised as a UK language has just been achieved. Although as a British Sign Language Act that would give D/deaf people the legal right to use and be educated with BSL has not yet been passed, so the websites continue with their mission.

Websites from D/deaf organisations are mainly made D/deaf by their contents, but D/deaf site owners were also designing them specifically for D/deaf people. They wanted to attract D/deaf people to their sites, through the inclusion of

D/deaf issues from a D/deaf person's perspective, and through the use of graphics and easy to understand information. D/deaf chatgroups in particular were explicitly constructing D/deaf cyberspaces. Deaf-UK for example, states in its policy that 'Deaf-UK is Deaf space, and this space is on Deaf people's terms'. The majority of D/deaf site users though (6 out of 10), did not experience D/deaf websites as being distinct from general websites, although they were glad that they existed and appreciated the D/deaf focus. Their responses to the possible presence of hearing people however revealed their allegiance to the notion of D/deaf cyberspaces. Whilst they were supportive of the general aim of inclusion, they were cautious against a possible 'take-over' by a hearing majority. D/deaf cyberspace needed to remain D/deaf, i.e. be designed by D/deaf people for other D/deaf people and to some extent have D/deaf content.

D/deaf people accepted the primacy of technological interactions in certain contexts, but they also valued their autonomous control over these relationships. Permanent connections that disrupted the integrity of embodied spaces were mainly rejected. The presence of specific technologies could make a space D/deaf and were important elements in terms of access, however they were firmly placed as tools and were considered secondary to the social interactions between humans. In D/deaf cyberspaces, the mediation of machines is more explicit and can't be relegated in quite the same way. Here technology both enables D/deaf identity and furthers Deaf Community. In all of these spaces, the vital consideration for D/deaf people was whether the potential to incorporate BSL was present.

BSL and the incorporation of technologies

As a minority language that has been actively suppressed, BSL is passionately defended by D/deaf people and Deaf organisations. D/deaf people's interactions with technologies are negotiated both individually and collectively on the basis of BSL use. The predominance of written English in D/deaf cyberspace can therefore be problematic.

BSL, technologies and individual D/deaf identities

Being a linguistic minority, BSL is a main component of Deaf identity. There are therefore strong personal attachments to its use. Most of the people who were interviewed in this study (16 out of 19) when asked how they felt about BSL, explained that it was emotionally very important to them. Indeed, they had learnt to sign despite the history of an oral education system that banned its use in schools. One sentiment that captures the importance of sign was that it was not just a language, but also a part of them. The significance of BSL however is challenged by technological connections, especially by communication technology. For example, whilst Minicoms increased individual autonomy and reduced reliance on hearing people, as they are based on written English they were nevertheless problematically experienced. On a functional level, D/deaf people who are strong BSL users often struggled to understand English as a second language. This is especially difficult given the speed of textphone responses. In addition, when the TalkDirect relay service was used, the human operators were considered unreliable as they made a lot of errors and misrepresented what the users were trying to convey, which further compounded problems with comprehension. Accuracy is perhaps made difficult by the complexity of the rhizome connections, which representing the exchange of just one sentence and one reply can be written as: human-machine-machine-human-human-machine-machine-human-human-machine-machine-human-human-machine-machine-human. Even so, better training would probably improve the service. The slower and more controlled (in terms of time) aspects of e-mail were somewhat easier than Minicoms, but again difficulties with grammatical English, particularly when sending to a hearing person, were highlighted as an area of concern. An extensive and complicated e-mail could be difficult to understand, and the expectations of reciprocity in terms of length led to some anxiety. Subsequently, the most popular communication technology was the short messaging service (SMS) on mobile phones. D/deaf people have the same access and to a large extent comparable service to hearing people. They can directly contact other mobile users and send texts that are based on the linguistic principles of BSL. SMS can also be incorporated into the rhythms of embodied space because they do not mark D/deaf people as 'abnormal'. The machines even

include 'deaf' features, for example vibrating and flashing light ring alerts. On an emotional level therefore, mobiles were experienced as being compatible with an individual's Deaf or deaf identity. People liked them and smiled when they talked or signed about them. They are not however, D/deaf people's preferred mode of connection, because they still don't transmit BSL. There was instead a lot of expectation about the development of videophones and the new generation of mobiles that can send pictures. Whilst access to mainstream technologies, like mobile phones, makes D/deaf lives easier, 'special' devices, despite the label of 'abnormal', will be acceptable if they enable a BSL connection. The best solution however seems to be fluid machines that can be used aurally and visually, with spoken and sign languages.

BSL, technologies and Deaf Community

Deaf Community is premised upon sign language; indeed the distinctiveness of Deaf Culture is created through visual communication. But oral languages have dominated the development of technologies and even devices designed for D/deaf people, for example Minicoms, utilise written English. Thus, despite the geographical spread of Deaf Community, the use of technologies in social interactions is limited. Far more emphasis is placed on face-to-face meetings, where BSL can be freely exchanged. Consequently for the D/deaf people in this study, the possibility of translation devices were not in general seen as compatible with Deaf Community practices, although in emergency situations they could be useful. The presence of technology was experienced as a disconnection from the natural rhythms of human interaction. Devices added another level of processing, which affected the timing of responses and so felt awkward. As BSL is not widespread, D/deaf people constantly grapple with the management of communication, and have to adjust their skills according to the situations they are faced with. Technologies were perceived as interfering with these adaptation abilities and thus hindered the establishment of rapport. Moreover, as machines have been co-opted into networks of oralism, Deaf Community engagements with technologies have a history of oppression. Machines have been used to dominate D/deaf people, and in the case of CIs are still being used against the opinion of Deaf Community. Subsequently, assistive

devices lack neutrality, translation devices therefore mark the divisions that have been created between BSL and English. Their presence could thus have a psychological impact on any exchange. In effect, they can work against BSL and Deaf Community because they are still mapped onto binaries that position D/deafness as inferior. Technologies need to translate across this division and facilitate the practices of Deaf Community. If BSL is included in the paradigm of the machine then they can be incorporated. For example, videophones that allow the transmission of BSL can be considered Deaf.

BSL, technologies and Deaf cyberspaces

D/deaf cyberspace is also a controversial area in relation to BSL. The Internet being designed by oral language speakers reflects this mode of communication and is mainly therefore conducted through text, with written English being the predominant form. Consequently, even though D/deaf websites are D/deaf spaces, they are to some extent working against the configuration of cultural Deafness based on the use of sign. There can therefore be some dispute over whether Deaf Community or Deaf identity can truly be performed in cyberspace. As the review of D/deaf websites illustrated, the majority of information contained on homepages is indeed in written English. There was some use of icons, which somewhat surprisingly the RNID website used the most. However, in all the websites, icons mainly linked to other pages of text. BSL was present to some degree, through static pictures of people signing or representations of fingerspelling, such as in the WFD, RAD, and BDA sites. And the FDP, as could be expected given their stance on BSL, managed to include a moving picture of the sign for FRIENDSHIP and was overall the most graphically orientated site. Even so, interactions in D/deaf cyberspace are mainly conducted in written English, and the potential for BSL use is almost non-existent. The majority of Internet users in this study recognised that this was a problem, and were concerned about access for strong BSL users. However, as site owners explained, they were unable to promote BSL inclusion because they were limited by the lack of visual technology that would enable BSL display. Although, they were hoping to incorporate BSL in the future as new developments in computer graphics and technological innovations in the transmission of visual information

were anticipated. Indeed, there was some excitement over the possibilities of D/deaf websites being conducted solely in BSL. Whether the lack of anonymity would inhibit the use of such websites remains to be seen. Certainly, input from D/deaf people at the invention stage would help to decrease the normative model on which much of the Internet, despite its radical ability to extend sensory abilities, is based.

On an individual basis, D/deaf people prefer technologies that can be used in conjunction with their Deaf identity and use of BSL. SMS features on mobile phones for example, can be used in a Deaf way with BSL structure, and their use is thus becoming an increasing feature of D/deaf people's lives. From a Community perspective, technology that interferes with BSL works against established practices. If BSL can't be used, machines interfere with social interaction and perpetuate binaries of domination. These negotiations are played out in D/deaf cyberspaces as exchanges here are conducted in written English, but Deaf organisations are increasingly using the Internet to promote BSL. This issue may however be resolved when future developments of graphic features allow BSL transmission.

The implications of D/deaf people's interactions with technologies

D/deaf people's perceptions of their technological interactions can extend geographical understanding by reconfiguring disability theory, introducing spatial aspects to knowledge of D/deafness, and furthering the development of hybrid geographies.

Reconfiguring disability theory

Disability cannot be divorced from bodies and minds as it is because of corporeal differences that disability is defined and named. Whilst barriers to participation undoubtedly discriminate and construct disability, the presence of corporeal differences should not be overlooked. Otherwise, disability theory will be separated from actual experiences (Corker, 1999b, 1999c), which will perpetuate binary thinking and the operation of normalisation. Maintaining the distinction between impairment and disability continues to situate disabled people as 'other',

because the interconnections of nature and culture, normal and abnormal etc. are not fully integrated. In addition, there is a notion of sameness, in terms of equality, that doesn't quite manage the inclusion of difference, in terms of experience. The social model's focus on society rather than on individual bodies is an important challenge to the inaccessibility of spatial arrangements, however the complexity of identity and the situatedness of practice are equally significant. A D/deaf perspective can illustrate this reconfiguration. For D/deaf people disability is not separate from impairment, indeed the classification of disability is rejected precisely because this sensory difference doesn't feel like impairment. And yet D/deaf people's normalcy is not the same as being hearing and discrimination occurs on the basis of having different bodies. As the experiences of technological interactions revealed, assistive devices may provide access and so remove disability, but the perception and identity of D/deafness remains. Certain technologies will be rejected, which obviously relates to function (whether they work with profound deafness), but mainly depends on whether specific machines fit with both individual and collective D/deafness. Thus, the removal of disabling barriers is not straightforward. What D/deaf people want is an acceptance and incorporation of their differences, which includes BSL as a first language and sensory dominance of vision and vibration.

A reconfiguration of disability also needs to embrace the simultaneous operation of individual and collective identities. Rhizomatic connections convey the complexity of disabled people's social relations. Thus, disability can traverse various routes including, for example, gender, ethnicity, and generations, all of which will lead to both the formation of selves and cultural inscriptions that in turn will become embodied. The effects of having a particular impairment are compounded by the diversity of social classifications, which detrimentally are dualistically structured. At the same time, the generality of disability, both socially as discrimination and individually through being situated abnormal, also contains specificities and a vast array of differences. Therefore, impairments can be grouped together and become a shared space of oppression - a disability, but particular impairments are also distinctly experienced - both a disability and an impairment. All disabilities contain these elements, but D/deafness, even when

disability and impairment are rejected, highlights the importance of both perspectives. Being deaf typically leads to a commonality of communication difficulties, interactions with medical professionals through audiological assessments, and engagements with various technologies that provide assistance with the predominance of aural ability. This collectiveness is taken further by a Deaf identity. Here the added experiences of 'special' education, use of BSL, and participation in Deaf Community, will also be common themes. Indeed the social aspect of Deafness has become integral to an individual notion of Deaf identity. The social inscriptions of disability and D/deafness (i.e. both physiological and cultural) are experienced individually. In addition, as group classifications, they are collectively encountered. Disability theory therefore has to incorporate diversity and similarity at the same time.

However, whilst an acceptance of diversity is important, the key aspect of disability theory that needs to be reconsidered is the binary between normality and abnormality (see also Dear, Wilton, Gaber & Takahashi, 1997). Obviously, this relates to the inclusion of differences, but also has to embrace a critique of nature and culture. The equation of impairment with abnormality drives the discrimination and oppression of disabled people, although the constitution of a 'normal body' is surprisingly narrow, and time-space contingent. Yet, disabled people find a social acceptance of their body as normal and natural difficult to obtain. But as Wendell (1996) points out, respect for differences

> '...would certainly mean not assuming that every disability wants to be 'cured'. It would mean seeking out and respecting knowledge and perspectives of people with disabilities. It would mean being willing to learn about and respect ways of being and forms of consciousness that are unfamiliar. And it would mean giving up the myths of control and the quest for perfection of the human body' (p. 84).

In other words, the notion of 'the body' that is premised on *the normal body* and *the natural body* needs to be exposed as a bounded concept that does not truly capture the complexity of human corporeality. Indeed it not only excludes disabled people, it also fails to recognise the ageing process, where if you live long enough you will most likely experience various classifications of

impairments. A D/deaf perspective again exposes the unacceptable link between disability and abnormality. D/deafness is not a disability if it feels normal. Indeed, certain technologies, such as CIs, are rejected precisely because they interfere with a natural notion of being D/deaf, which is compounded by their 'artificial' insertion into corporeal space. As disability is integral to ability and both are premised upon divisions between abnormality and normality, reworking the term seems a daunting task. Both Parr & Butler (1999) and Shakespeare & Watson (2002) have suggested that various mind and body spaces should be seen as a continuum of disabilities and abilities, however this is still a linear representation that includes the in-between, but nevertheless retains two end-points. A rhizomatic configuration that recognises nodes of similarities, such as D/deafness, and the entanglements and associations of specific practices and experiences, seems a better way to express the complexity of disability and ability.

Thus, the corporeal experience of disability should be seen as a multiple position. Certain aspects may stabilise over time and in specific contexts, but disabled and impaired bodies are always in motion because they interconnect with other things, like machines. These associations work through the dynamics of both nature and culture, and contain elements of essentialism and social construction. In terms of human abilities, all bodies have physical limitations, and so there is an essential nature to corporeality. At the same time, cultural discourses including regulatory politics, resistant opposition, etc. are inscribed and become embodied. Moreover, the social experience of disability is partially situated. Physical differences invariably lead to technological connections, which can operate in a variety of ways. These associations, as Law & Mol (1995) argue, are not about sameness or difference but instead can be imagined as a patchwork. D/deaf people for example, cannot hear certain sounds and so essentially (with a lot of variations) have a different relationship to aural information. In addition, deafness is constructed and categories such as mildly deaf or profoundly deaf are created, which impact upon various aspects of D/deaf people's lives. The interactions of nature and culture are then mediated by machines. This can clearly be seen with assistive devices that are designed to replace sensory and

physical attributes, as here 'unnatural' cultural artefacts are introduced into 'natural' bodies. Although the DEAF-WAY premised upon an essential notion of Deafness, that rejects the cultural imposition of oralism and any technologies that are considered part of oral networks, reasserts a nature/culture divide. Any emphasis on binaries should be seen as political strategies designed to empower D/deaf people, for as the notion of Deafhood proposed by Ladd (2003) attests, the actualisation of D/deafness is variable and multiple.

Spatialities of D/deafness

The essentialism of the 'normal body', where deafness is placed as abnormal, actively works against the inclusion of D/deaf people and refuses to recognise positive elements of being D/deaf. At the same time, an essentialism of 'natural' Deaf heritage that typically includes blood-ties, a strong commitment to sign, some participation in Deaf Community, presence of Deaf attitude, and experiences of Deaf schooling, by separating Deafness from hearingness is also somewhat disconnected from deafness. Whilst a self-definition of Deafness is important as it can be used to establish an alternative consciousness that works against being placed as abnormal, the emphasis on 'natural' notions of Deafness may nonetheless be problematic. As hooks (1990) has argued in relation to Black experience.

> 'The unwillingness to critique essentialism on the part of many African-Americans is rooted in the fear that it will cause folks to lose sight of the specific history and experience of African-Americans and the unique sensibilities and culture that arise from that experience. An adequate response to this concern is to critique essentialism while emphasizing the significance of "the authority of experience". There is a radical difference between a repudiation of the idea that there is a black "essence" and recognition of the way black identity has been specifically constituted in the experience of exile and struggle' (p.29).

D/deaf people have their own history of oppression and continually experience aural and oral discrimination. Promoting a birth right to Deaf Culture therefore legitimises struggles towards the acceptance of bilingualism and negates the pathological model of being deaf. However, only a minority of D/deaf children

born into D/deaf families experience a seamless entry into Deaf Community. For many D/deaf people the route towards Deafhood can be an intense and sometimes conflicting experience (see e.g. Ladd, 1991). Although joyous outcomes are achieved, where a positive Deaf identity is realised, the essentialism of Deafness may create boundaries that circumscribe the possibilities of being D/deaf. Moreover, the heterogeneity of D/deafness is purified, and the binary between being hearing and being D/deaf is strengthened, which can restrict challenges to discrimination.

As the incorporation of fluid spaces can highlight the various routes and passages of D/deafness, moving beyond essentialism towards a relational approach that recognises rhizome connections and the fallacy of discrete binaries, may prove more inclusive. D/deaf identity rather than being fixed, can thus be characterised as multiple, where for example deaf people can be culturally hearing (when deafened, or predominantly oral language users) and hearing people can be culturally Deaf (when children of D/deaf parents). Within this configuration of D/deafness '...the life of every being, as it unfolds, contributes at once to the progeneration of the future and to the regeneration of the past' (Ingold, 2000 p. 143). The limited genealogical transmission of D/deafness becomes a positive attribute, as Deaf Culture can evolve free of the boundaries of tradition, whilst emphasising the significance of D/deaf histories. This moves towards Haraway's (1997) desire for new ways of relating.

> 'I am sick to death of bonding through kinship and "the family", and I long for models of solidarity and human unity and difference rooted in friendship, work, partially shared purposes, intractable collective pain, inescapable mortality, and persistent hope' (p. 265).

Although the family model remains intact and is still important, kinship ties within D/deafness are made through shared experiences. Similarly, incorporating rhizome connections recognises that Deaf Community spaces can be created anywhere that D/deaf people choose to congregate. As the confidence of D/deaf people increases alongside the acceptance of BSL, so D/deaf spaces can be facilitated by Deaf Clubs but not restricted to them. Moreover, the plurality of identity where being D/deaf is both an individual and collective experience can

also be included as simultaneous understandings, where various aspects constantly interrelate. This reconfiguration captures the complexity of the performativity of D/deafness. It is important to realise however, that moving beyond essentialism does not negate corporeal differences. Being physiologically deaf does alter individual sensibilities and 'naturally' leads to visual and tactile awareness. How such perceptions operate however, depends on the context of time-space and the interactions between nature(s) and culture(s), which have been illustrated by D/deaf people's interactions with technologies.

Devices designed for D/deaf people are not motionless things that merely assist. They are transiting artefacts that have a significance that goes beyond their function. As Lally (2002) has pointed out

> 'It is not that the objects of material culture act as a 'human mirror', passively reflecting or making identity, but that they are actively involved in the construction of human subjects in the social and cultural world' (p. 24)

They are also, as D/deaf people know, active in the creation of corporeal discourses, where being deaf is considered abnormal and so machines are employed towards rehabilitation and the perpetuation of normativity. However, as we have seen from the responses of various D/deaf people, interactions with machines are mutable. Thus, whilst they may be adopted to reinforce binaries, especially the dualism between a normal or abnormal body, machines also work across and through the fixed appearance of linear direction. As we have seen, hearing aids can be Deaf, deaf, and hearing, running along a variety of rhizomatic pathways where usage is dependent upon context, political background, individual and collective emotions, memory, and language choice. CIs are also fluid, but their movement has been constrained by an assortment of powerful restrictions that place them firmly into oppositions between Deaf and hearing, oral and sign; whether these positions can ever be overcome remains to be seen. D/deaf people interviewed in this study were certainly aware of the increasing presence of young D/deaf people with implants, and as the D/deaf histories of technological engagement attests, oral devices can be incorporated alongside a Deaf attitude and use of sign. Indeed, CIs highlight the importance of

a relational approach, where a shared understanding of corporeal differences, especially given the historical negation a positive view of deafness, should be promoted whatever technology is employed.

Whilst assistive and communication technologies can work across differences, computers and the construction of D/deaf cyberspaces, have perhaps the greatest potential to become an important resources for D/deaf people. D/deaf websites and chatgroups are circulating information about D/deaf issues, and providing fluid connections that navigate limited geographical and genealogical inheritance. Isolated individuals can access Deaf Community and young D/deaf people and hearing parents can learn about D/deafness through the experiences of other D/deaf people. In addition, allowing both casual and committed encounters, D/deaf cyberspaces can be used as preparations for engagements in 'real' space, where some prior understanding of D/deafness can boost the confidence of individuals who wish to access D/deaf identities. Just as Deaf Clubs advertise the presence of D/deaf people in local neighbourhoods, D/deaf websites make D/deafness visible to a wider audience. This is a vital process of inclusion that works towards the incorporation of differences that are not subsumed into the operations of normalisation. Although, as e-mails are presently transmitted in written English and so are inaccessible to some D/deaf people, these spaces can perhaps be seen as more deaf than Deaf. However, as the D/deaf Internet users and site designers in this study have revealed, BSL will be incorporated once the technology is readily available. This is an exciting area to contemplate, as Deaf Community in the UK will be greatly extended once e-mails become e(BSL)-mails. Moreover, there are opportunities for bilingualism, where D/deaf websites, indeed websites in general, could be transmitted in both written English and BSL, which could break down discriminatory binaries between speech or sign.

The historical connection between the suppression of BSL and the development of various technologies cannot be overlooked. D/deaf people's interactions with machines are based upon the historical legacy and memories of oralism. Consequently, for D/deaf people in the UK, emotional attachments to devices are

mediated by the potential to incorporate BSL and for deaf people the capacity to engage with oral languages. Thus, if machines continue to be based upon a normative model that assumes or promotes aural capabilities the fluidity of D/deafness will be constrained. D/deaf people constantly adapt their use of devices so that they fit in with the rhythm of BSL. This process is currently working with mobiles and SMS, where the brevity of the message and subsequent changes in word order make English understanding easier and so compatible with Deaf Community. Even so, the use of BSL is still a paramount concern. Videophones therefore are presently being inserted into communication options, and the introduction of mobile phones that transmit pictures as well as sounds will be welcomed. Indeed, flexible technologies that can be used without markers of abnormality are preferred, as D/deaf people using them can be both different and the same. Reflecting this fluidity of humans and machines, and normal and abnormal bodies, the opposition between oral and sign, as well as the notion that BSL is D/deaf people's 'natural' language, has to be confronted. Whilst, Deaf people and to some extent deaf people have a predisposition towards visual aspects of language, BSL is an evolving cultural resource weaving around constructions and experiences of identities. As Deaf organisations already understand, there need not be an either/or decision between oral language and sign language, but rather the potential for bilingualism in all directions. Then technologies reflecting this diversity will no longer be wedded to the oppression of oralism. Thus, corporeal differences will be recognised and hopefully legitimised.

Hybrid geographies and fluid space

The inclusion of disabled bodies critiques the bounded concept of 'the body', and points instead towards fluid configurations, where different corporealities are acknowledged. However, as Dorn (1998) argues, privileging metaphors of movement can be used as a retreat from the real world and the messiness of bodies, especially disabled bodies. Thus, whilst all bodies can be seen as fluid, the materialism of being in and engaging with the world is also a significant aspect of embodiment (see also Weiss, 1999). It is also important to collapse the binary between mind and body, as neither exists without the other, so body

spaces also include mind spaces (Butler & Parr, 1999). As ANT suggests, human attributes are revealed as effects of network relations that 'pass through and ramify both within and beyond the body' (Law, 1992 p. 3), and so body spaces can also include machines. Again, the inclusion of disability makes these connections explicit. Whilst tools and adornments show incorporations, technologies that are used as assistive devices, highlight the intimacy of attachments. As Law (1999) explains

> 'Actor-network is, has been, a semiotic machine for waging war on essential differences. It has insisted on the performative character of relations and the objects constituted in those relations. It has insisted on the possibility, at least in principle, that they might be otherwise. Some, perhaps many, of the essentialisms that it has sough to erode are strongly linked to topology, to a logic of space, to spatiality' (p. 7).

ANT therefore, deconstructs binaries that are used to classify and position differences. The essential notion of 'the body' can be reworked and shown to be a construction contingent on time-space. Adding in a rhizome system, that stresses the entanglements of connections, increases the complexity of how such performances may be staged, but nevertheless, incorporates further dimensions that importantly move away from linear thinking, where bodies are multiply linked and the spatiality of these passages is three-dimensional (see Pile & Thrift, 1995). In this understanding of space, or rather spaces, binaries are dissolved through their interactions and the simultaneity of an *and* approach, whereby bodies can be normal *and* abnormal, indeed, where the relationships between distinctions, are the constituents of bodies.

This fluidity of body spaces can be revealed by D/deaf people's interactions with technologies. As we have seen, D/deafness is a multiple position, constructed through ideologies of normativism and created through shared notions of belonging. D/deaf people can therefore be disabled and not disabled, normal and abnormal. Indeed, the changeability of these positions required constant negotiations. Hearing aids traverse binaries, designed for deaf people they are however sometimes deaf and sometimes hearing. Because the ability to control their use is possible, they can be removed from body spaces depending on the

situation and communication requirements. As such, hearing aids were considered acceptable to Deaf Community, and although they weren't quite Deaf, they could be used in a DEAF-WAY. Cochlear implants are also deaf and hearing, they are again designed for deaf people but, lacking the adaptability of hearing aids, they maintain a constant presence and so interrupt individual autonomy, and because of their link to oralism they are primarily perceived as hearing. CIs therefore move to a certain degree, but unlike hearing aids, are never Deaf. But, as increasing numbers of D/deaf children have implants, their position may change in the future, especially if bilingual education is extended. Mobile phones and SMS however, though not particularly designed for D/deaf people, can be used in a DEAF-WAY. The mutability of mobiles, being perceived as 'normal' and used by hearing people; being visual and therefore accessible to deaf people; being compatible with BSL and thus adopted by D/deaf people, has led to their acceptance by Deaf Community. Mobile phones reflect the complexity of rhizome relations and so work with the fluidity of bodies. The future generation of videophones will also perform across boundaries and perhaps fit even better with the sensibility of human interactions, as signing, speaking, and lip-reading will all be possible. Through associations with technologies, body spaces are thus exposed as three-dimensional, both fluid and partially bound. The integrity of corporeal space is an important aspect of human subjectivity, and mechanical intimacies are perceived as both part and separate. This relates to the distinction maintained between normality and abnormality, where a mechanical body part negatively situates and calls attention to corporeal differences that are structured as inferior, but also to the desire for control, where the political implications of using specific technologies are significant.

Technological connections are driven by power relations, which can limit the creation and application of specific objects (Law, 2002). Indeed, complex associations between humans and nonhumans are typically placed within a dualistic hegemony, so instead of providing links they are instead used as demarcations. Thus, artefacts of disability may assist specific impairments, but they also position people across the divides of normal/abnormal, superior/inferior, etc, which map onto spatial inequalities. Despite the exclusions

they create, as dichotomies represent stability and performances are made through repetition, so binaries are difficult to transcend. However, as Michael (2000) points out

> '...these structurings or orderings are never absolute: they are always contingent. Under certain conditions, they can be resisted or subverted. So, in counterpoint to successful prescription – that is, subscription – there is also de-inscription, wherein human actors withstand, repulse or undermine the prescriptions or proscriptions ordering non-humans' (p. 23).

Thus, the creation of shared spaces that contain a collective consciousness, can be mobilised against networks of power that co-opt certain technologies. D/deaf people for example, assess new technologies on the basis of their visual or tactile capabilities and crucially on their position within networks of oralism. In this study, hearing aids were sometimes rejected not only because they didn't work, but also in response to being forced to wear them as children. Strong BSL users felt that they didn't need hearing aids (although their capacity to block tinnitus was sometimes considered useful) as they experienced them as instruments of oral communication that were part of the suppression of their sign language. This perception is somewhat validated by the actions of D/deaf hearing aid users, who in general wore them to facilitate oral communication. Indeed, where hearing aid users were bilingual they exercised control over the spaces of their use, often removing them in signing spaces. This connection between oralism and technology is made explicit by cochlear implants. The optimum age for implants is before the age of two, i.e. pre-lingual. Thus, the rationale for implants ultimately rests on oral language ability. Consequently, although the cosmetic appearance of CIs and the intimacy of their corporeal introduction were problematic, their incompatibility with the politics of Deafness is the main reason they are renounced.

The operations of fluid space, where the interactions of humans and machines are explicit can also be revealed through an examination of cyberspace. Being a mutable environment, cyberspace highlights the co-existence of various binaries. Combining real space and virtual space, embodied and disembodied presence,

the Internet can incorporate difference whilst also facilitating community participation. Clearly, the right software has to be available, but as the reach and capabilities of cyberspace expand, so accessibility is increasing. Computer technology in the UK is becoming ubiquitous, and as we have seen in this study, D/deaf people and organisations have recognised the opportunities that such connections may present, and have developed D/deaf websites that aim towards a collective experience of D/deafness. Through the provision of information and opportunities for social interaction, D/deaf cyberspace can further the associations of D/deaf people. To a certain extent, the geographies of cyberspace reflect the dispersed nature of Deaf Community. Thus, even though the technology is new the symbolism of belonging is somewhat unchanged. Indeed, as Stafford (1994) has argued, the Internet is a new form of oral-visual culture, and so D/deaf cyberspaces (albeit being more interactive) can be seen as a continuation of print publications such as the old *Deaf and Dumb Times*, which historically also provided information about D/deaf issues and worked towards the construction of Deaf Community. Unfortunately, being part of oral as well as visual culture, the fluidity of cyberspace is constrained by a reliance on spoken languages. Lacking the capacity to transmit BSL, the binary between sign and speech is reinforced, and so cyberspace is not quite Deaf. However, through continuous movement, new possibilities occur, and the extension of graphic features could lead to cyber signing spaces, as the recent BDA site (SIGN *Together*[89]) anticipates. Once these capabilities become widespread, computer technologies will be D/deaf as well as hearing, which will increase the mutability of interactions and strengthen the scope of Deaf Community.

Whilst humans and machines can be seen as equal elements of network relations, technological connections are also shaped by human competences such as emotions, memory and language (Thrift, 1999a). As Williams & Bendelow (1998) point out,

> 'Emotions exert a powerful influence over whether social structures are faithfully reproduced or experienced as alienating and therefore in need of transformation' (p. 154).

[89] See website http://www.britishdeafassociation.org.uk

Similarly, both individual memories of past experiences and collective heritage affect the generation and operation of technological associations. Just as language, especially rhythms of exchange and the possibilities of shared understanding, exerts a powerful influence. For D/deaf people these three aspects, that basically facilitate the possibilities of linkage, were an important part of their negotiations with machines. Technologies, especially where the connection was intimate, had to feel 'right' before they were accepted, and this related to personal sentiments surrounding individual body images and emotional responses to social structures and their spatial positioning. Thus, hearing aids could be emotionally accepted when they neither constrained an individual's body nor adversely affected the political situation of Deafness, whereas as CIs were passionately rejected and viewed with distaste because they were emotionally experienced as both alien and oppressive. Devices designed for D/deaf people are also entangled within the cultural histories and personal memories of D/deafness. For example, as oral educationalists forced D/deaf people to wear hearing aids at school, so resistance to oralism often led to the abandonment of hearing aids. Likewise, the dominance of a medical perspective that has largely suppressed the development of Deaf Culture has led to distrust and defensive positions, where any device that encroaches upon the notion of Deaf pride will be rejected, hence the stance against CIs. Aspects of both emotions and memories also feed into the importance of language. Deaf people are a linguistic minority, the ability to sign is therefore one of the main criteria of being Deaf. In addition, where deafness is considered a disability, this mainly operates in relation to communication. The places of languages in rhizomatic connections are thus highly significant. Indeed, overall, the dominance of oral language appears to be the main arbitrator of D/deaf people's interactions with technologies. Devices were assessed on their capacities to assist with spoken language *and* whether they interfered with the transmission of sign. Oral language users (bilingual and monolingual) were happy to use equipment that amplified sound, especially voices, whereas sign language users liked devices that relied on vision. Even when equipment was not directly related to communication, for example vibrating fire alarms, they were still considered in relation to body rhythms, especially whether they constrained movement and

thus restricted signing space, and visual intrusiveness and the possibilities of being marked abnormal. Thus, as they directly influence the practices of mechanical use, these three elements of emotion, memory and language have a considerable role in network relations.

Separate positions can be important political stances that guard against the experiences of oppression, but the maintenance of these standpoints can lead to exclusions that perpetuate the constitution of normativity. Hence, whilst hierarchical and dualist structures are constructed and the effects felt, the polarities created should be seen as situational rather than fixed. Indeed, the notion of fluid space can work through binaries, revealing that social distinctions are both in opposition and interconnected. D/deaf people are linked to hearing people through commonality and divided through their different sensibilities. Nature and culture therefore operate in association, but the directions of their inscription depend upon political relations and specific abilities that influence the possibilities of interaction. As we have seen, technological developments based upon perceptions of natural attributes are in fact proscribed by cultural assumptions. As Thrift (2000) has argued, body practices determine the construction of what is considered 'natural' and so create 'a background of expectation'. But only certain body practices have fed into dominant notions of nature, and different corporealities have to constantly reassert their presence. As we have seen, aural and visual abilities, the use of oral and sign languages, and power relations surrounding these elements, all affected D/deaf people's interactions with technologies. As D/deaf people's body practices are considered 'unnatural', influence over widespread expectations is limited, and discriminations against difference must constantly be resisted. Yet, all bodies should be understood as mutable and partial. Having both genealogies and maps, they are fluid spaces that can incorporate such differences. However, this understanding can only be apprehended if nature and culture are also seen as fluid, and normativity is no longer a defining aspect of being.

Appendices

Appendix One – Question Schedule For Interviews (via sign/voice)

Some basic information:

Name

Gender

Deaf or hard of hearing (HoH)?

Born or deafened, age occurred?

Other people in family deaf? Who?

First language what? English/BSL/other

I am interested in how D/deaf people use technology in their personal lives and in the Deaf community. So first, I would like you to think about your life at home and at work.

PERSONAL SPACE

What devices do you use to help with your deafness – at home and at work?

e.g. e-mail; loops; minicom; mobile text; videophone; video with subtitle recorder; vibrating alerts (phone, door, baby, clock, fire)

Difference between home and work?

What situations do you use them?

When?

Who with?

Why do you use them?

Do they make a difference to your life?

What like about them?

What dislike about them? Suggested improvements

How make feel, awkward, more confident, same? What?

Ever without them? When don't use them?

Is there anything you would change?

Are there some wish had? Why?

Any technology would like to see in the future? (Suggestions – portable smoke alarms for hotels etc; mobiles with pictures; voice to sign recognition portable devices).

COMMUNITY SPACE

how would you describe the Deaf community?

How do you become part of the Deaf community?

Are all D/deaf people automatically part, or must join?

If joined when did join? Why?

Can you be part of the Deaf community if you don't meet up with other D/deaf people?

Do you think D/deaf people need Deaf centres or Deaf clubs?

Why? Why not?

Is it important to have somewhere to meet?

Why? Why not?

At the Deaf centre you can meet up for a drink so it is like a pub, but is it different from a pub?

What makes Deaf places special?

Do you go?

How long been going?

What's it like? Atmosphere, how feel with other D/deaf people?

Enjoy going, explore

Do they need special devices?

(e.g. minicoms, flashing alarms)?

Why? Why not?

Do devices make a difference to how feel when there or not?

What about hearing aids how do you feel about them?

Ever wear them? When? Why and why not?

Do hearing aids make a difference to whether someone is part of the Deaf community?

Explore

What about CI's how do you feel about them?

Explore

Do you use e-mails or text messages?

Explore

Now that D/deaf people can communicate with e-mails and text messages, is there less need to meet up with other D/deaf people?

BSL

What about BSL how important is it to you?

Age learnt?

If don't sign can you be part of the Deaf community?

Think any technology could help with communication differences between deaf people?

With hearing people?

Would it be OK to use them at Deaf centres/clubs?

Thank you

Appendix Two – Questions Sent To D/deaf Website Owners (via e-mail)

PERSONAL DETAILS

Name (either real or Internet username):

Date of birth:

Gender:

Nationality:

DEAFNESS DETAILS

Are you deaf or are you hard of hearing?

Were you born deaf/hard of hearing?

If you were deafened at what age did this occur?

Are you hearing?

Are other people in your family deaf or hard of hearing? Who?

Do you wear hearing aids?

Do you have a cochlear implant?

What was your first language?

If you use Sign Language, at what age did you learn to communicate with it?

SITE INFORMATION

What is the URL of your website:

What country or countries is your site aimed at?

In what year did you activate this site?

What search engines are you connected to?

What words do you use to designate your site?

Do you publicise your site outside of the Internet? Where?

If you monitor your website how many hits have you received since it began?

Was the design of the site a sole project by you or were other people involved?

Who?

Is there a house style that you are part of?

Why did you set up the site?

What do you think it offers people?

What do you like best about your website?

Do you think your website reflects your personality? How?

Who would you like to attract to your website?

Do you have any rules about the contents of your site? What are they?

Do you provide any forum for feedback from users?

How often do you read your site?

How often do you update it?

Does your site have hyperlinks?

What does it link to?

DEAF SPACE

Do you think this site is part of creating a community?

Do you think it contributes to Deaf culture?

What makes it a Deaf site?

How do you keep it Deaf?

Is it OK if hearing people use the site?

Does it make it less Deaf if hearing people use it?

What about hard of hearing people, is it ok if they use it?

Now that we can communicate with e-mails and get information from websites, do you think there is less need to physically meet up with other deaf or hard of hearing people? Why?

Does it matter that the site is in English and not sign language?

If there were no limits to the available technology, what if anything would you change on the site?

Please feel free to add anything if you wish.

Thank you for agreeing to be part of this research. All responses will be confidential. Please return your views via the reply button. If you have any questions please e-mail me: ek6530@bris.ac.uk.

Appendix Three – Questions Sent To D/deaf Website Users (via e-mail)

PERSONAL DETAILS

Name (either real or Internet username):

Date of birth:

Gender:

Nationality:

DEAFNESS DETAILS

Are you deaf or are you hard of hearing?

Were you born deaf/hard of hearing?

If you were deafened at what age did this occur?

Are other people in your family deaf or hard of hearing? Who?

Do you wear hearing aids?

Do you have a cochlear implant?

What was your first language?

If you use Sign Language, at what age did you learn to communicate with it?

SITE DETAILS

How long been logging on to Deaf sites?

Which Deaf sites do you access?

Roughly, how often a week do you look at them?

What do you think of them?

Is there anything special about them?

Do you enjoy them or dislike them? Why?

Do they make a difference to your life?

How did you find out about the Deaf sites you log onto?

Do Deaf sites feel different to other sites? In what way?

Remember back to when you first logged on to a Deaf site how did you feel then?

DEAF SPACE

Are you part of the Deaf community outside of cyberspace?

Do you see yourself as deaf, hearing, or in-between deaf and hearing?

Are you proud to be deaf or hard of hearing?

Do you think Deaf sites are part of creating a community?

Is there a global Deaf community?

Do you think the sites contribute to Deaf culture?

Are Deaf sites just about sharing information or are they more than that?

Do you feel connected to other deaf people when you use these sites?

What makes a Deaf site, deaf rather than hearing?

How do you keep them Deaf?

Is it OK if hearing people use the sites?

Does it make them less Deaf if hearing people use them?

What about hard of hearing people, is it ok if they use them?

Now that we can communicate with e-mails and get information from websites, do you think there is less need to physically meet up with other deaf or hard of hearing people? Why?

Are deaf or hard of hearing people more visual than hearing people?

Does it matter that the sites are in English and not sign language?

Do you think future users will keep Deaf sites going?

If there were no limits to the available technology, what if anything would you change on the sites?

Please feel free to add anything if you wish.

Thank you for agreeing to be part of this research. All responses will be confidential. Please return your views via the reply button. If you have any questions please e-mail me: ek6530@bris.ac.uk.

Appendix Four – Introductory Request For Interviews

DEAF PEOPLE AND THEIR USE OF TECHNOLOGY

Funded by the Economic and Social Research Council

I am a researcher at the University of Bristol. I am looking at D/deaf people's interaction with technology, in particular what devices are being used and the differences they are making to the lives of D/deaf people. I would like to interview D/deaf people, so that their views and opinions are included in this study. Being D/deaf myself I want to make sure that the findings are shared. I will therefore do my best to make them accessible. As I am still improving my own sign language, the interviews will be conducted with an interpreter. All responses will be confidential.

If you would be willing to participate in this project, or if you require any further information, please contact me at the address, e-mail or textphones given below:

Ember Kelly
School of Geographical Sciences
University of Bristol
University Road
Bristol
BS8 1SS
E-mail: ek6530@bris.ac.uk
Minicom/voice phone (evenings only): -
Mobile phone: -

Appendix Five – Initial E-Mails Requesting Participation

To Site Owners

I am a researcher at the University of Bristol (UK). I am looking at deaf people's interaction with technology, in particular, how the Internet is being used to share information and provide connections to other deaf people. I am interested in the views of owners and designers of Deaf sites, and would like to know about their experiences of setting up and running these sites. If you would be willing to participate in this study please would you answer the questions below and then return them to me. All responses will be confidential. Being deaf myself I want to make sure that the findings are shared with the Deaf community, I will therefore do my best to make them accessible. If you require any further information please contact me: ek6530@bris.ac.uk

To Site Users

Hi

As some of you may know, I am a researcher at the Bristol University. For my PhD, I am writing about deafness because I think it is an important experience that has been missing from human geography. I am looking at deaf people's interaction with technology, such as how the Internet is being used to share information and provide connections to other deaf people. I know that we all like feedback so I will do my best to make sure that the findings are shared with the Deaf community, either through Deaf-UK and/or BDN.

If you would be willing to participate in this study by filling in an e-mailed questionnaire, or if you require any further information, please contact me: ek6530@bris.ac.uk

All responses will be confidential.

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BBC News: http://www.bbc.co.uk

British Deaf Association (BDA): http://britishdeafassociation.org.uk

Connevans equipment for D/deaf people: http://www.connevans.com

Cornish Language Board: http://www.cornish-language.org

Corporate Social Responsibility Europe: http://www.csreurope.org

Council for the Advancement of Communication with Deaf People (CACDP): http://www.cacdp.org.uk

Deaf Power Now: http://www.deafpowernow.org

DeafChat: http://communities.msn.com/DeafChatGroup

Deafok: http://www.deafok.com

Deaf-UK: http://groups.yahoo.com/group/deaf-uk

Disability Archives: http://www.leeds.ac.uk/disability-studies/archiveuk

Ear Information: http://www.earinfo.com

Federation of Deaf People (FDP): http://www.fdp.org.uk

Higher Education Statistics Agency: http://www.hesa.ac.uk

Institute of Hearing Research: http://www.ihr.mrc.ac.uk

Kenneth Berger Museum: http://dept.kent.edu/hearingaidmuseum/index.html

Oticon Eriksholm Musuem – Sound & Fury site:
http://www.pbs.org/wnet/soundandfury/cochlear/heaeringaids.html

Royal Association for Deaf People (RAD): http://www.royaldeaf.org.uk

Royal National Institute for Deaf People: http://www.rnid.org.uk

Welsh Government: http://www.wales.gov.uk

World Federation of the Deaf (WFD): http://www.wfdnews.org